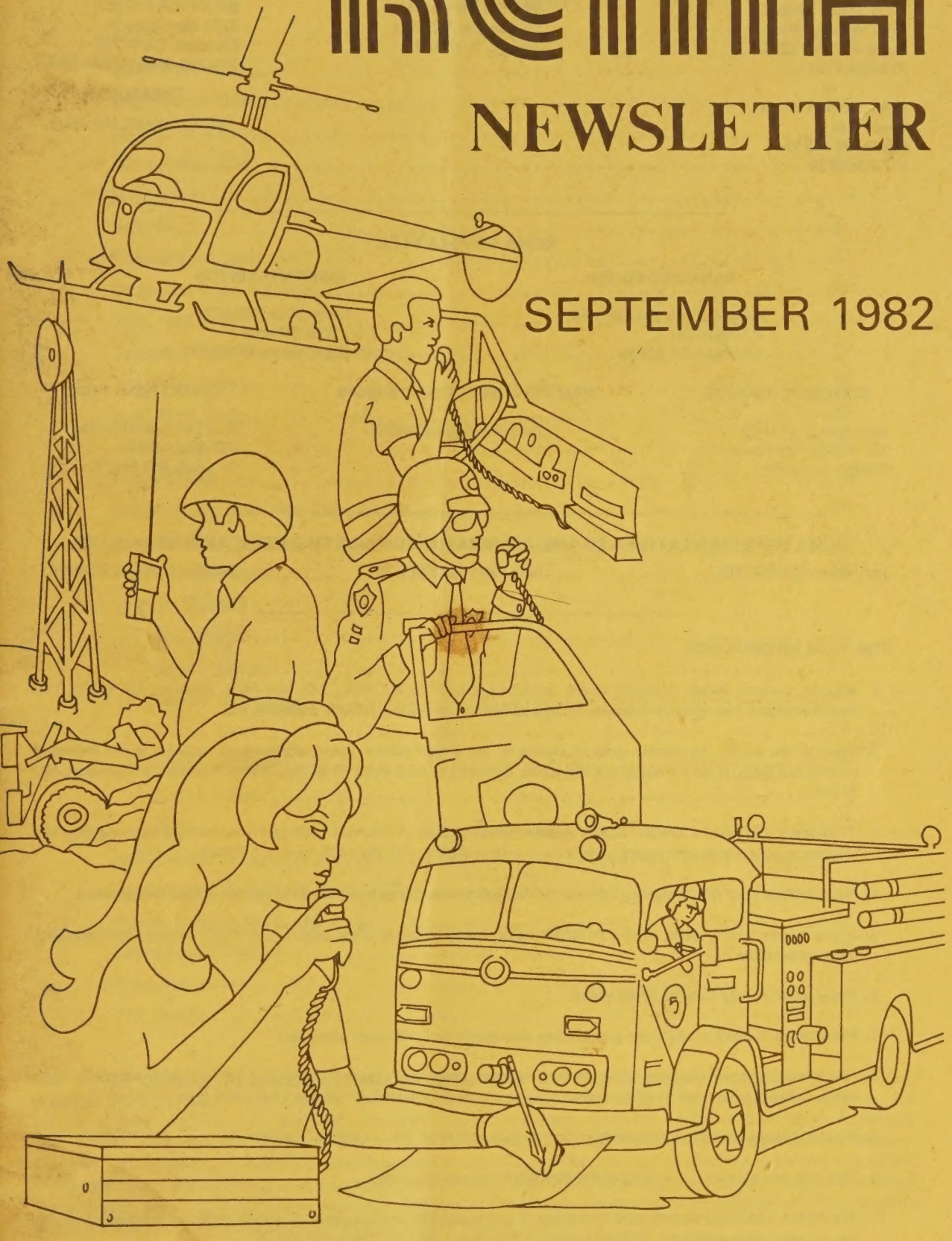
RCMA

NEWSLETTER

SEPTEMBER 1982



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OF MONITOR RADIO LISTENERS

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FOR YOUR INFORMATION:

1. All club business, unless otherwise noted, must be addressed to R.C.M.A., P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, newsletter delivery problems, etc.

2. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropriate, send input to RCMA, 1 West Potomac, Williamsport, MD 21795.

3. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address on it; mail to RCMA, P.O. Box 408, Earp, CA 92242.

4. Please include your RCMA membership number with all correspondence to newsletter editors or club headquarters.

5. If you require a reply when writing to RCMA headquarters or to one of the editors, you MUST enclose a self-addressed, stamped envelope.

6. Please write on only one side of the paper.

7. Please don't combine in one letter several items that should go to different addresses.

8. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.

9. Your RCMA membership number and expiration date appear on your newsletter mailing label.

10. You may join or renew your membership for ONLY one year at a time.

11. The RCMA Newsletter accepts paid advertising. If you would like to place a paid ad, please write to the following address for our advertising guidelines: RCMA Newsletter, P.O. Box 13602, St. Louis, MO 63138

RCMA NEWSLETTER
Issue 78 September 1982
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The RCMA Newsletter is published monthly by members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $15.00 for U.S. residents. For persons in other countries, the following rates apply: Canada and Mexico—$17.00; Europe—$18.50, South Pacific and Asia—$20.00. These dues are payable in U.S. funds and are subject to change. Information contained herein is obtained primarily from members and does not necessarily present the position or reflect the opinion of RCMA as a whole. The RCMA Newsletter editors and officers are not responsible for the accuracy or validity of information contained herein. RCMA does not necessarily recommend or endorse products or services advertised herein. The publication is copyrighted©Reproduction of any material in this newsletter is prohibited without prior written consent.

Notice: The above rates effective until September 1, 1982.

PLEASE READ THE LAST PAGE !!!!

** Calendar **

Send notices of upcoming events for the Calendar section to:
John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.
Please send notices well in advance of the Newsletter deadline.

R.C.M.A. Chicago

Contact Edward Robert Sirovy IL-004 312 969 2856
311 S. Williams Street, Westmont, Il 60559

Meetings: NANCINI'S Resturant 5555 St Charles Road, Berkeley, Il
two blocks east of St Charles Road exit from Eisenhouer
Expressway Extention I-290 (phone 312 544 7277)

September 25 1982 Saturday 1:00 PM
November 13 1982 Saturday 1:00 PM

A SASE on file assures notification of tours and other item which may be scheduled on short notice.

R.C.M.A. Connecticut Chapter

Contact Bill Moore CT 038 203-223-0840
950 Farmington Ave, New Britain, CT 06051

R.C.M.A. Dallas-Fort Worth

Contact Mike Pruden TX 072 metro 461 2602
Larry Van Horn TN 017 642 8407
David Coursey TX 107

Regular bi-monthly meetings are scheduled the second Saturday of each odd month Tenative location
Stoneridge Homeowner's Association Clubhouse
500 Grants Parkway, Arlington, Tx (SW of Arkansas and Collins)

Sept 11, 1982 7:00 PM
Nov 14, 1982 7:00 PM

For latest information and newsletter send a stack of SASEs to
Scanning Dallas/FortWorth
1111 N. Carrier Parkway #B-107
Grand Prarie, Tx 75050

HAM RADIO CLASSES

Gorden West CAOR017 a long time R.C.M.A. member, author and educator will be offering another class in amateur radio the first week of September at Orange Coast College, Costa Mesa, Ca.

While the class is directed at getting you an amateur radio license, the material covered will assist you in understanding some of the technical aspects of monitoring. Due to changes in State funding of classes there will be a charge for attending the class. ($30.00 to $40.00 we think)

Most of the members of the Greater L.A. Chapter of R.C.M.A. have taken the class and recommend it. For more information call 714 549 5000.

Members in other areas should check with their local community colleges for a similar course. It should be noted that most anti-scanner laws have clauses excluding their application to licensed amateur radion operators. Such a class could be considered good insurance as well as an intro to another interesting radio hobby.

Reports of Meetings and Officers

Send reports (informal accounts) of RCMA meetings, gatherings, etc. which have occured to:
John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

ATTENTION RCMA MEMBERS AND EDITORS . . .

Thought I would take this opportunity to bring you up to date with what is going on in the area of Newsletter policy.

Our membership continues to grow, which means that more and more people look forward each month to receiving their copy of the Newsletter. To try to ensure that each copy of the Newsletter is as full as possible, RCMA is instituting a new policy. From now on, if more than two consecutive months pass with no column and no communication or explanation, the post of editor for that particular column will be considered vacant. Most of the editors who occasionally do not send in a column have good reasons for such an omission—editors lead as full and busy lives as the rest of us — so the new guideline may be seen as a reminder of how important it is to produce a publication that consistantly carries information on all aspects of monitor radio listening.

I am going to use this section of the Newsletter to keep you posted, on a monthly basis, on vacant editorial posts. If you are interested in becoming an RCMA editor, please contact Ginny Slick, Assistant Editor, 1 West Potomac, Williamsport, MD, 21795.

RCMA needs editors for the following columns:

Public Safety - South East
VHF Marine

As you know, one of the club goals is "to promote an understanding of the legal and ethical uses of monitor receivers." To this end, the Newsletter does not publish sensitive material or frequencies.
A formal policy statement regarding such sensitive frequencies and information follows immediately.

Carol Ruth
RCMA Managing Editor

RCMA POLICY ON PUBLISHING AND DISCUSSING SENSITIVE OR CLASSIFIED FEDERAL GOVERNMENT INFORMATION

At the request of the Managing Editor and the Board of Directors, we have been asked to prepare a policy statement regarding the discussion and dissemination of information (frequencies and radio systems) about certain federal agencies deemed to be sensitive in nature.

Club policy for some time has been to refrain from the publishing of such sensitive (and usually classified) "information" in our Newsletter-including references to same and the agencies involved. There are two simple reasons for this policy:

1. Much of the information is "classified" and publication is possibly illegal anyway.
2. There are the possibilities that investigators and/or agents might be compromised.

At least one chapter has taken this policy and extended it a bit further-completely omitting such information and any references to same in the open body of its "official" meetings and any correspondence sent out under its "banner head".

We assume that other RCMA chapters and organized groups follow a similar set of rules or procedures. Such a blanket policy gives no justification to any legal action or restrictions against RCMA, but only against the actual individuals who might possibly be violating any law.

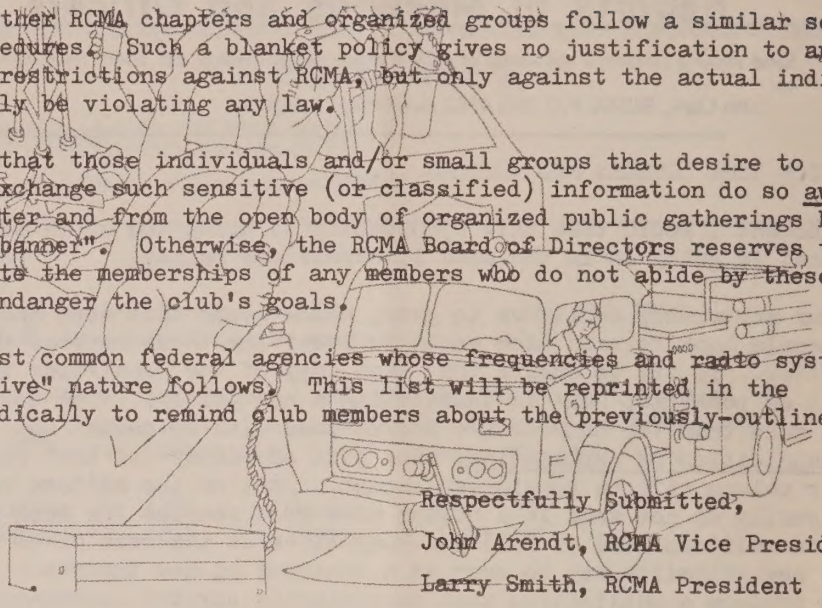
It is requested that those individuals and/or small groups that desire to discuss and/or exchange such sensitive (or classified) information do so away from our Newsletter and from the open body of organized public gatherings held under the RCMA "banner". Otherwise, the RCMA Board of Directors reserves the right to terminate the memberships of any members who do not abide by these rules and thus endanger the club's goals.

A list of the most common federal agencies whose frequencies and radio systems are of a "sensitive" nature follows. This list will be reprinted in the Newsletter periodically to remind club members about the previously-outlined policy.

Respectfully Submitted,

John Arendt, RCMA Vice President

Larry Smith, RCMA President



FEDERAL AGENCIES WHOSE FREQUENCIES AND RADIO SYSTEMS ARE DEEMED TO BE "SENSITIVE" IN NATURE

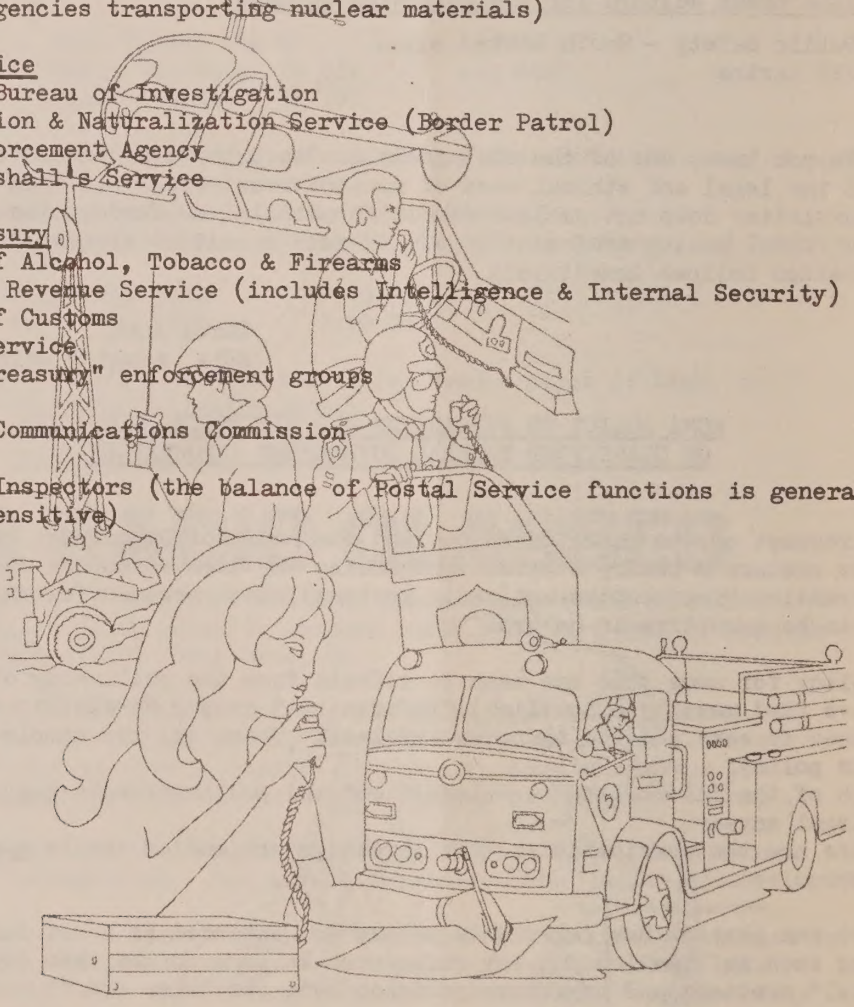
WHCA White House Communications Agencies (includes the FOX #s on shortwave)
CIA Central Intelligence Agency
NSA National Security Agency
NRC Nuclear Regulatory Commission (includes nuclear power installations and agencies transporting nuclear materials)

Dept. of Justice
FBI Federal Bureau of Investigation
IBP Immigration & Naturalization Service (Border Patrol)
DEA Drug Enforcement Agency
USM U.S. Marshall's Service

Dept. of Traesury
ATF Bureau of Alcohol, Tobacco & Firearms
IRS Internal Revenue Service (includes Intelligence & Internal Security)
CUST Bureau of Customs
SS Secret Service
"Other Treasury" enforcement groups

FCC Federal Communications Commission

USPS Postal Inspectors (the balance of Postal Service functions is generally not sensitive)



THOUGHT waves

Ginny Slick, RCMA Assistant Editor, 1 West Potomic, Williamsport, MD 21795

Summertime, and the scannin' is - different. A rainy weekend at the shore with my 101 produced some listening not like the usual calls in my rural area. Well, they were alike, yet different. What, you may ask, is that supposed to mean? I mean that the ocean and its surroundings seemed to make the calls more exciting. For example, the logistics of trying to get a heart patient to the hospital from a boat (ship?) miles out from shore are quite a bit more difficult than from a home in my area. It seemed to take forever.

I live in an area where helicopter transport from an accident to the Shock-Trauma unit is taken for granted. Our EMS people take pride in a quick response. So I wondered if the use of a helicopter was ever considered at the shore. I didn't hear any such calls. Maybe someone out there could enlighten me as to their availability.

And then there was the call concerning three escaped convicts. In MD. we have that type of call all the time. MSP sends out a helicopter, they light up the area; and they soon have their men. (Taken into custody while trying to hitch a ride on 70 or 81, usually.) Why did it all seem so exotic at the shore? I conjured up pictures of evil men, clad in stripes, dodging behind sand dunes by the light of the moon. They were still AT LARGE when we left. (Somehow more AT LARGE than at home.)

It seems that monitoring is exciting in just about any area. I would not be surprised to find that there are groups who take their scanners and head for a certain area just for the fun of searching out new frequencies. The Hams do it - why can't we? The advent of Bearcat's new handheld monitor with search capabilities makes this very possible. For years I have been taking my 101 and its necessary manual on all our trips. I used to carry it to the car and wait for my husband's inevitable disparaging remarks. Now I hide it in the luggage and set it up quietly when he's in the shower. I really <u>need</u> that BC-100. Maybe I'll win the Publisher's Clearinghouse contest and be able to buy all these things!

Many thanks to all those people who sent words of welcome and encouragement after reading the first column. I received one letter from a female - yes - there is at least one out there; Gayle Van Horn. She has spent a night (& morning) at the shortwave; a prerequisite for a new club that I'm thinking of forming, to be called Breakfast in Earphones.

And super-special thanks to all of you who have come forward to offer your help as editors of columns. If you offered and haven't heard beans from anyone; be patient or write again. With so many changes in <u>who</u> you're supposed to send <u>what</u> to, it has taken a while for some requests to come to light. Believe me, we appreciate any offers of help, and if you don't get it this time, we might be able to use you in the future. Last, but not least, please keep those cards and letters comin'. I love 'em! They give me ideas which I desperately need to keep writing this column. 'Til next time I wish you all (specially that other local weirdo) Happy Hunting.....

YOUR THOUGHTS

To the Editor:

The 1982 edition of The Visiting Fireman has just been published. This "Directory of Fire Buffs" is a soft bound book containing 392 pages of information on fire service and Fire Buff organizations, museums, and other related items such as fire radio frequencies. The bulk of the book consists of listing fire buffs from the United States, Canada and other countries such as Australia, Germany and the United Kingdom. Quite a few RCMA members are listed in the directory. Interspersed throughout the book are photos of fire apparatus.

The Visiting Fireman is an invaluable book to anyone who is seriously interested in fire buffing in general or specifically one aspect of it such as fire radio monitoring. Many good friendships and exchanges of information have developed through this wonderful book.

The 1982 edition is available while supplies last from this address: The Visiting Fireman, 1024 Elizabeth Street, Naperville, Illinois, 60540.

Sincerely,
Michael Yanul (IL-014)

IMPORTANT NOTICE:

Beginning September 1, 1982, there will be an increase in the RCMA subscription rate/membership fee. The increase is as follows: $16.50 for U.S. residents, $18.50 in Canada and Mexico, $20.00 in Europe, $21.50 in the South Pacific and Asia.

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS
NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs send a self-addressed, stamped business size envelope with your request to the address below.

For an annual subscription to the ANARC Newsletter, send $5 to:
Joe Barr, 1500 Bunbury Drive, Whittier, CA 90601. ($8 overseas subscription.)

Aug 28 WASHINGTON AREA DX ASSOCIATION meeting at the home of Arlene Luskin, 606 Forest Glen Road, Silver Springs, MD 20901. All radio listeners in the Greater Washington DC area invited. For information write the above address or call 301-593-4411 (evenings and weekends)

Sept 3-5 National Radio Club (NRC) Annual convention for Medium Wave AM Dxers For Information send SASE to NRC, PO Box 32125, Louisville, KY 40232

Sept 10-12 ASOCIATION DX PARCELONA 2ND DX Conference for Spain. For details write ADXB, C/Niza 17-19, Atico 2, Barcelona 24, SPAIN

ANARC no longer has any IRC's for sale.

BELOW 30 MHZ

Robert Horvitz, editor

This column is for AM, SSB, RTTY, CW & FAX reception reports, explanatory notes, articles, news & questions related to HF utilities. Services covered in this column include civilian aeronautical, coastal/marine, government, military, weather, etc. -- essentially everything except broadcasting, CB & amateur radio. Send to: Robert Horvitz, 54 East Manning St., Providence, RI 02906
If you need a reception report form, please enclose a SASE with your request.

Special Feature: Over-the-Horizon Backscatter Radar

A wave of indignation swept through the North American shortwave community in 1980 when the USAF announced it was beginning experimental operation of an OTH-B radar transmitter in Maine. Much of the hysteria was due to the all-too-familiar sputter of the "Red Woodpecker", Russia's OTH-B system, as it chops mercilessly through the HF band. Ours will be different, the Air Force said. We'll avoid the ham, maritime, aeronautical and standard-frequency bands, and we'll only use the fixed and broadcast bands on a 'non-interference basis'. Our signal be continuous-wave FM spread over small swaths of spectrum some 20 to 60 times a second--not at all like the crude, concentrated pulses that the Russians use on an 'interference-be-damned basis'. We won't bother you a bit.

Well, we'll soon see. "General Electric Co. was awarded a $66.7 million Air Force contract for work on the initial operating sector of an over-the-horizon radar system for the continental US", according to the June 15th issue of the Wall St. Journal.

As mentioned in the July Newsletter, a wealth of information about this project can be found in the Draft Supplement to the Environmental Impact Statement, available from NTIS and quoted extensively below. Another excellent article I found is "Over-the-Horizon Radar in the HF Band" by James M. Headrick & Merrill I. Skolnik in the Proceedings of the IEEE, Vol. 62, No. 6 (June 1974). This tells the history of US research and development of OTH-B radar, and gives general treatment of the technical problems and solutions involved:

"The earliest 'radars' were at HF and were used to measure the height of the ionosphere... The first operational military radar system was also at HF. This was the CH radar system installed by the British in 1938 for aircraft detection...

"In the United States, significant work on OTH radar using HF frequencies and both ground-wave and sky-wave propagation started in the late 1940's. The organizations engaged in this early work included the Watson Laboratories of the Army Air Force, the Lincoln Laboratory of the Massachusetts Institute of Technology, the National Bureau of Standards, the Raytheon Company, RCA, and Stanford University. In the early 1950's, the Naval Research Laboratory started a program to demonstrate the feasibility of sky-wave radar for aircraft targets...

"It was realized that if targets of interest were to be seen, the extremely large undesired clutter echo returned from the ground must be suppressed relative to the target signal. For example, the echo from the ground might easily be 40-80 dB greater than an aircraft echo... To increase the target-to-clutter ratio requires high resolution in range and angle... At HF, sufficient resolution in angle and/or range to suppress completely the clutter echo is difficult to achieve. For example, a 1° beamwidth requires an antenna of the order of 2 km. Range resolution requires a wide-signal bandwidth, but it is seldom that the ionosphere can effectively support an instantaneous bandwidth greater than about 100 kHz, which corresponds to a range resolution of roughly $1\frac{1}{2}$ km... Doppler processing is thus clearly needed in an OTH radar for most targets... The signal processor has been the key element in the success achieved with OTH radar...

"The antenna for an HF OTH radar is probably more demanding than for any other radar application. The antenna should be of high gain, cover an extremely wide frequency range, be steerable in elevation, be rapidly steerable over a wide azimuth, and handle high power. Such an antenna will be of large size and require a large ground screen to keep the elevation launch angles low if vertical polarization is used..."

The comments by Headrick and Skolnik about the importance of a narrow beam to reduce clutter echo should be welcome to all HF monitors and users. The initial operating sector of the Maine installation is supposed to produce a mainlobe beam about 6° wide. That's twice as wide as the original plan called for, and it appears to me that the 2nd bounce could fall on Western Europe when the radar is operating in the outer half of its range.

The authors also point out that the radar receiver's sensitivity is limited primarily by external noise--an important source of which is other HF transmitters. It would be stupid for the radar to use a frequency already being used by someone else, they suggest, because that would make interpretation of the echo harder. That's a reassuring argument--except that the radarmen in Maine may not detect the output of a user whose signal doesn't reach Maine but whose intended receiver could be inundated by the 2nd bounce of the 1,200 kW radar beam. Detectability isn't mutual when an elephant and an ant share the same footpath!

Another excellent article about OTH-B is "Over-the-Horizon or Ionospheric Radar" by O. G. Villard, Jr., in QST (April 1980). Some excerpts:

"The mission of CONUS OTH-B is to give early warning of bomber attack via the northeast oceanic approaches to the US and Canada... Since all aircraft flying over the water must routinely file flight plans in advance, those seen by the radar within the above zone are then compared with their reported plan; if a target or targets cannot be associated with such a plan, appropriate action is taken. The radar can go from a general search mode to a spotlight mode for a closer look if desired...

"[The broadside receiving array] located at Columbia Falls, Maine, is about 4000 feet in length. Since mechanical rotation would hardly be practical, scanning is accomplished by digital beamforming and slewing. The beam is made unidirectional by means of a reflecting screen located about a quarter-wave behind the radiating elements.

"Essentially the same design is used at the transmitting location, except that the transmitting beam is made wider so as to floodlight the area within which multiple receiving beams conduct a fine-scale search...

"The radar is, of course, computer-controlled and extraordinarily flexible. It is provided with a low-power auxiliary sounder which repeatedly checks all the available frequencies to determine what propagation paths are present, what their loss is, whether they are adequately stable, and whether multipath is present. A separate facility automatically checks all the available channels for interference, measuring not only the level at any given instant, but also the time history of that channel's usage...

Some bands allocated for use by OTH-B radar on a 'non-interference basis' (data from QST):	
6.765-7.000 MHz	
7.300-7.5084	14.350-14.993
7.530-8.195	15.100-16.460
9.040-9.995	17.360-17.900
10.100-11.175	18.030-19.990
11.400-12.330	20.007-21.000
13.360-14.000	21.450-21.850

"The actual method of operation is approximately as follows. First, the useful band of frequencies is determined from soundings and other data. Then the open allocated channels within that band are identified and ranked in order of desirability. Low path loss, low multipath and low noise are the chief criteria. The radar then comes up on the most desirable frequency and continues there until conditions change or interference develops, at which point it instantaneously changes to the frequency which at that moment is at the top of the continuously updated 'most desirable allowable frequency' list. Often the radar will shift from an otherwise excellent frequency in order to resolve range or Doppler (velocity) ambiguities...

"OTHRs are designed to work through some level of interference, no matter what its origin. For example, there are circuits which convert interfering carriers (from Teletype or shortwave broadcasting stations, for example) into what the radar receiver perceives as relatively harmless broadband noise. This can be done because the radar has full control of its transmitted signal and receiver characteristics...

"As everyone knows...it is unfeasible to transmit a waveform having a spectrum with perfectly square sides. As a result, when a radar such as CONUS OTH-B operates adjacent to a ham [or otherwise-occupied] band and its signals become strong enough, there may be enough side-frequency spillover to be bothersome...

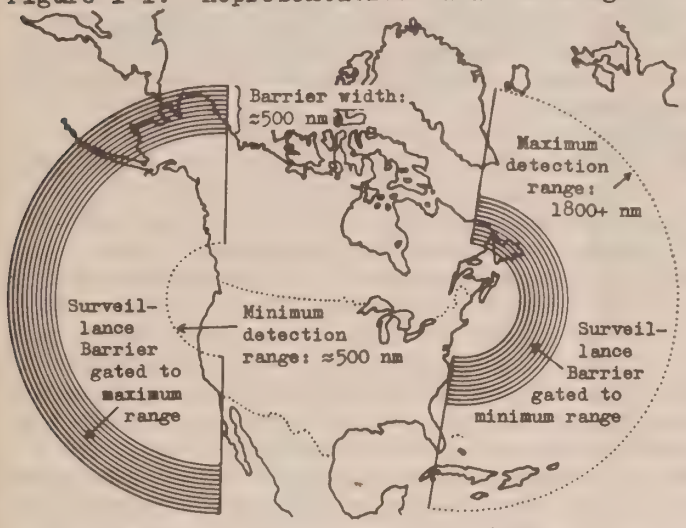
"Since the transmitter beam (like the receiver) is formed by a broadside array

of elements, an almost equally strong beam would appear in the reverse direction were it not for the action of a reflecting curtain, which cuts the backward radiation by some 20 dB, the exact amount depending on the frequency. Thus amateurs [and other HF users!] off the back of the transmitting array in the appropriate direction will be the most likely to encounter interference when propagation is strong...

"The Air Force has made the necessary arrangements to have reports of actual interference by the OTH-B handled promptly and expeditiously. A special board of QRM experts has been set up as overall interference coordinator for the CONUS OTH-B. This board will appreciate your report and will do everything possible to assist you. Its address is: OTH Radar Office, US Air Force Electronics Systems Division, Code OCUE, Hanscom AFB, MA 01731."

Excerpts from the EIS Draft Supplement

Figure 1-1: Representative Radar Coverage


Barrier width: ≈500 nm
Maximum detection range: 1800+ nm
Surveillance Barrier gated to maximum range
Minimum detection range: ≈500 nm
Surveillance Barrier gated to minimum range

"Two OTH-B operational radar systems (ORS) are planned, one near each coast (see Figure 1-1). Each ORS will cover 180° in azimuth and will include 3 transmitter and 3 receiver sectors, each sector covering 60° in azimuth. The transmitter and receiver antennas and equipment will be located at remote sites, separated by about 100 nautical miles (nm) to prevent interference. Processed data will be communicated from the receiver location to an operations site for correlation with known aircraft positions... Barrier coverage nominally 500 nm in range extent will be provided. The barrier will be movable in range to provide coverage from a a minimum of approximately 500 nm from the radar transmitter locations to a maximum of approximately 1,800 nm from each location (see Figure 1-1)...

"The OTH-B radar program was started in the early 1970s. In 1975, a contract was let to build a prototype radar system (PRS), intended to prove out engineering concepts... Budget limitations dictated the construction of a smaller version, termed an Experimental Radar System (ERS), with limited frequency range--6.74-22.25 MHz instead of 5-30 MHz--smaller asimuthal coverage--30° instead of 60°--and reduced power 1.2 megawatts (MW) instead of 2.4 MW...

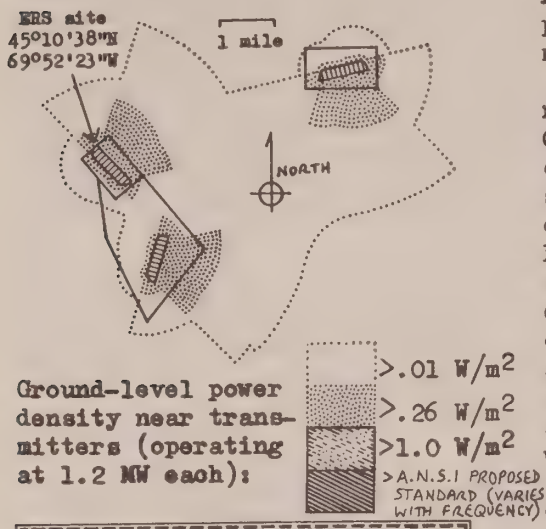
"The Air Force now intends to upgrade the ERS to a full-scale, 60° sector very similar to the original prototype to establish operational suitability, and then to implement the original plan to expand that 60° sector by adding two similar sectors to cover the full 180° in azimuth... [No mention of any site or funding plan for the West Coast system in this document--ed.]

"...The ERS transmitter site and collocated receiver/operations site were installed near Moscow and Columbia Falls as planned for the prototype... The location now proposed for the integrated operations center and maintenance and security facility is the Bangor International Airport (BIA), formerly Dow Air Force Base... Bangor is near the center of the state and is approximately midway between the transmitter and receiver sites... The planned location [for the receiver is]...an uninhabited area in townships 18 & 19 Middle District within Washington County... The setting near the proposed transmitter site in Somerset County is...surrounded by forest products company land, remote from all permanent habitation. This context is significant in the evaluation and update of health and safety related effects...

"It is estimated that in 1983 the total project work force would be 855 persons, 730 of whom would be construction workers... In 1985, the Air Force operational work force would consist of 509 persons--477 military personnel and 32 civilians...

"System Parameters ...Depending on transmission frequency, the [radar mainlobe] axis is elevated approximately 12° to 22°, and the mainlobe extends approximately

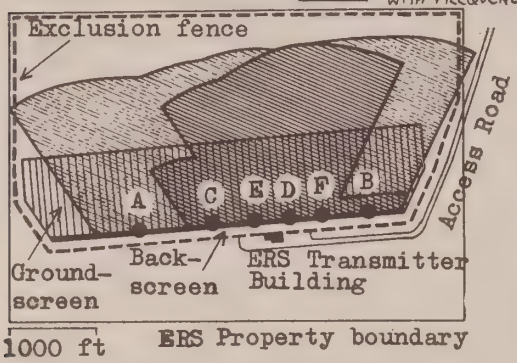
±3° in azimuth and +8° to ±16° in elevation about the axis... the maximum power density for sidelobes...is a factor of 20 smaller than the maximum power density in the mainlobe, and the backlobes (antenna lobes radiating behind the backscreen) have a maximum power density a factor of 100 smaller than the mainlobe maximum.



Ground-level power density near transmitters (operating at 1.2 MW each):

"It is impractical to design a single antenna array to accomplish the objectives of the OTH-B radar throughout the entire band of frequencies needed (5-30.6 MHz). Consequently, 6 separate antenna arrays are planned, only one of which will be driven at any given time. Each array consists of 12 elements, uniformly spaced in a plane in front of a vertical conducting backscreen. The 6 arrays are aligned over a common groundscreen [see diagram]. Each array serves the specific band of frequencies shown [below diagram]. Both the groundscreen and backscreen are constructed of galvanized wire mesh.

"Because of the array configuration, the OTH-B radar will produce a radiation field that is concentrated in a fan-shaped beam, narrow in azimuth, much wider in elevation. The azimuth of the mainlobe axis is steered ±30° from the direction perpendicular to the backscreen by varying the phase (timing) of the signals fed to the 12 elements of the array that is in use.



"...the dipole array elements [for] Bands E and F use the vertical orientation... However, the elements of the other bands are oriented at a 45° angle to the vertical. In effect, half the radiated power can be considered to be radiated with vertical polarization and half with horizontal polarization... Viewed from behind, the elements of bands D and C are tilted 45° clockwise, those of band B are tilted 45° counterclockwise... [No mention of the giant band A antenna that GE is building—ed.]

"...all personnel are denied access to the area within the exclusion fence when the radar is operating..."

Band	MHz range	Array length
A	5.00-6.74	1016 ft
B	6.74-9.09	754
C	9.09-12.25	559
D	12.25-16.50	415
E	16.50-22.25	308
F	22.25-30.60	226

Summarizing the EIS's discussion of safety factors requires considerable oversimplification, but anyway, the point outside the exclusion fence with the highest calculated (and actually measured) power density is near where the groundscreen begins to parallel the access road. When the center of the B array's mainlobe passes over and through this point, the calculated power density at ground level is 1.1 mW/cm^2 = 11 W/m^2. A recent measurement at the ERS site gave a scaled value of .39 mW/cm^2 for this point when the radar was operating at 7.83 MHz. "At Chase Pond, about 1.25 miles southwest of the ERS site and site of the first full 60° sector, where several private camps exist, the calculated power density is less than .0001 mW/cm^2 for the full 180° system. At the closest population centers of Moscow and Bingham, nearly 6 miles south of the closest 60° sector, the calculated power density is less than .00001 mW/cm^2 for the planned 180° system..."

However: "The OTH-B power densities at ground level exceed the safety standard [for electro-explosive devices—ie., radio-triggered blasting caps—when they are not carried in metallic containers and their wire leads are formed into an antenna] for distances well beyond the exclusion fence for most azimuths." The dotted line on the top diagram above shows the area exceeding this safety standard.

Appendix C of the statement is a lengthy review of recent research into the biological effect of RF radiation, and current safety standards in the US and abroad. This is fascinating material but there isn't enough time or space to go into it now. Suffice it to say there are a lot of disagreements and controversies, and I want

to give you at least a few conclusions: "...although RF radiation at the frequencies in the OTH-B range is deeply penetrating, most of the incident power density is reflected at the surface of the body... At 30 MHz, the SAR [Specific Absorption Rate] is about .02 W/kg per mW/cm^2 for the E orientation [the long axis of the body parallel to electrical polarization]... The presence of a ground plane or other reflecting surfaces shifts the resonant frequencies downward and can produce higher values of whole body SAR... Especially pertinent to OTH-B are the results of Hagmann and Gandhi (1979). Their calculations show that for a homogeneous block model of the average or "standard" man in electrical contact with an infinite, perfectly conducting ground plane, the whole-body resonant frequency (in the E orientation) is shifted from a free-space value of 77 MHz to 47 MHz; i.e., to a value much closer to the OTH-B frequency band. Moreover, the whole-body SAR at 47 MHz is 32.5% higher than at 77 MHz... Among the interesting results obtained by Guy et al. (1976) were that exposure of a full-size human figurine to an electric field parallel to its length at frequencies in the HF band yields relatively high SARs in the regions of the body where the cross-section perpendicular to current flow is relatively small, such as the neck, knees, and ankles. Also, exposure of the figurine to a magnetic field perpendicular to the frontal plane in the same frequency range produces eddy currents that yield relatively high SARs where such currents are forced through relatively small cross-sectional areas or are diverted by sharp angular changes, such as in the groin and along the sides of the body near the ribs. These results are especially pertinent to near-field exposure situations...

"Most investigations involving chronic exposures of mammals yielded either no effects or reversible, noncumulative behavioral or physiological effects for average power densities exceeding 2 mW/cm^2. In the few cases in which irreversible adverse effects of exposure were found, such effects were absent for average power densities below 2 mW/cm^2...

"In short, no reliable evidence has been found to support the conclusion that any hazard will result from either short-term or long-term exposure of people outside the exclusion fence to the RF radiation from OTH-B."

I'm just a layman, and frankly don't understand either electromagnetism or the human body well enough to refute the conclusion of the EIS that the radar is totally nonhazardous, but it seemed to me that the authors of Appendix C went out of their way to criticize and refute experiments that found RF-induced biological effects other than microwave heating. Now it may be that the experiments that claimed to find such effects were collectively shoddier than those that found no effects at all. But I felt that the authors were predisposed to find that the OTH-B was totally nonhazardous. That does <u>not</u> mean that it <u>is</u> a biological hazard --only that I think there is more room for argument than the EIS authors acknowledge. Fortunately, the transmitters are pretty far from populated areas.

It may seem that radar is a long way from communications monitoring. But monitoring in the HF band is limited by noise and interference far moreso than the clean, local FM stuff you VHF/UHFans like to tune. The HF bands are already terribly overburdened. If the USAF builds the entire OTH-B system, they'll be shooting 7,200 kilowatts of humming and chirping into the ionosphere, 24 hrs a day, 360° around, over a mightybig chunk of the HF spectrum. For the sake of comparison, consider that the total output of all the Voice of America's US-based transmitters is 7,275 kw. And VOA surely wants to be heard. We're talking A L O T O F N O I S E ! Consider further what the whole system might cost. If the GE contract covers 2 antenna arrays and a transmitter upgrading at an already-functioning site, each of the 6 transmitters might run in the neighborhood of $150 million, for a total of $900 million. Figure the receivers at a third of that figure because they don't have to handle such high power. Figure the costs of computers, communications links, power consuption and labor. We're talking A L O T O F M O N E Y ! Construction may already have begun by the time you read this, but I can't help thinking: isn't there a better, cheaper, less-likely-to-interfere way to surveill the Atlantic and Pacific airspaces--with microwave radar satellites in north-south orbits, for instance? <u>Aviation Week & Space Technology</u> says the Navy is going to launch such a system. Couldn't the Air Force get together with the Navy and develop a single system for both their needs? Please?

Note: the opinions expressed herein are my own and do not represent RCMA thinking in <u>any</u> official sense.

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Rob Berezowski, our Canadian editor, forwarded a long, fascinating list from Guy (CAN-031). Since I've already hogged so much space this month, I'll have to hold over the bulk of Guy's contribution, and just skim some of the cream:

Royal Canadian Mounted Police (RCMP)

MHz	Emission	Province
2.788	A1	Alberta
2.7895	A3H A3J	NWT BC Manitoba
4.7765	A3H A3J	NWT Alberta Nfld
4.7835	A3H A3J	Yukon NWT BC Alta Man Ont PQ NS
4.7865	A3H A3J	Yukon NWT BC Alta Man Ont PQ NS Sask NB Nfld
4.7985	A3H A3J	BC Manitoba
4.8125	A3H	Sask
5.4435	A3H A3J	Alta Man Ont PQ
5.445	A1	PQ
5.4465	A3H A3J	Alta Sask Man Ont PQ
6.792	A1	(Ottawa/Paris)
7.7785	A3H A3J	Yukon NWT Alta Man Ont PQ NS
7.780	A1	(Ottawa/Paris)
7.7815	A3H A3J	Yukon NWT BC Alta Sask Man Ont PQ NB NS Nfld
9.1035	A3H A3J	NWT Alta NB NS
9.105	A1	(Ottawa/Paris)
9.1065	A3H A3J	NWT Alta Ont NB NS Nfld
9.200	A1	(Ottawa/Paris)
14.6185	A3H A3J	Alta Man Ont PQ NB NS
14.620	A1	Ont PQ
14.6215	A3H A3J	Yukon NWT Alta Man Ont PQ NB NS Nfld
14.8175	A1	(Ottawa/Paris)
19.130	A1	(Ottawa/Paris)
19.360	A1	(Ottawa/Paris)
21.785	A1 A3J	(Ottawa/Paris)
21.8075	A1	(Ottawa/Paris)
24.110	A1 A3J	(Ottawa/Paris)

Foreign Embassies in Ottawa

5.194/5.398	A1 F1	Poland	15.597	A3J	Saudi Arabia
5.398/5.194	F1	Poland	15.705	A1 F1	Yugoslavia
7.445	F1	Yugoslavia	16.024/16.413	A1 F1	Poland
7.791/8.097	A1 F1	Poland	16.459	A1 F1	Yugoslavia
8.097/7.791	F1	Poland	17.450	A3J	Saudi Arabia
8.172	A1 F1	Yugoslavia	17.532/18.060	A1 F1	Poland
10.780	A1 F1	Yugoslavia	17.624	A3J	Saudi Arabia
10.942/11.688	F1	Poland	18.247	A1 F1	Yugoslavia
11.688/10.942	A1 F1	Poland	18.355/19.942	A1 F1	Poland
12.295	F1	Yugoslavia	20.030/21.817	A1 F1	Poland
14.448/14.684	F1	Poland	23.100	A3J	Saudi Arabia
14.515	A1 F1	Yugoslavia	23.376	A1 F1	Poland
15.582	A1 F1	Poland			

The first time I saw things like A3J and F1 on a frequency list, I said, wha??? For those of you who still react that way, here's an explanation. The first letter is the type of modulation: A = AM; F = FM; P = pulse. This is followed by a number that indicates the type of transmission: 0 = no information-carrying modulation; 1 = telegraphy without a modulating audio frequency; 2 = telegraphy by on/off keying of an audio frequency or frequencies; 3 = telephony (including sound broadcasting); 4 = facsimile; 5 = television (picture only); 6 = four-frequency diplex telegraphy; 7 = multi-channel voice-frequency telegraphy; 9 = cases not covered by the above. Supplementary characteristics are sometimes indicated with a third character: (none) = double sideband; A = single sideband reduced carrier; H = single sideband full carrier; J = single sideband suppressed carrier; B = two independent sidebands; C = vestigial sideband; D = AM pulse; E = width- or duration-modulated pulse; F = phase- or position-modulated pulse; G = code-modulated pulse; Y = digital modulation.

Air Force 1

Dick Stedman (MA-071) reported on the President's flight to Peoria, then Chicago on May 9: 6.683 was used as the in-flight voice primary, 11.180 was used as the in-flight secondary, and 17.993 was used as voice primary on the ground. Dick also monitored SAM 86971 on May 5th on 6.683 carrying Secretary of Defense Weinberger to a NATO defense ministers' meeting.

Richard L. Kramer (PA-093) monitored Air Force 1 from takeoff at 1420Z to 1900Z as it carried the President to France. He reports 11.249 USB as AF-1's primary and SAM 26000's secondary; 13.215 LSB as SAM 26000's primary and AF-1's secondary; 15.015 LSB as the primary for Rescue Alpha, Mail Pouch and Checkmate; and 23.265 USB as backup for all of the above. Richard adds: "Air-to-air comms were on 319.4 UHF for AF-1, Checkmate and SAM 26000; and 121.6 VHF for Mail Pouch, Rescue Alpha and SAM 86973." I forgot to say these were all noted on June 2. (While I'm interrupting Rich, I might note that I heard AF-1 and SAM 26000 using 6.683 in the hours just prior to landing at Andrews on the return flight.) Rich continues with other subjects: "The hurricane HF net was active on 6.645 USB when hurricane Alberto was heading for the Florida keys. This freq is used mainly at night, while 13.260 USB is popular for daytime use... On the last Shuttle flight [he must mean the one in late March] a duplex circuit was used on HF. Cape Radio used 22.755 USB while the aircraft used 19.303 USB. One unit was heard on 10.780 USB. Tracking stations were busy on 20.186 USB. A satellite data network was set up with 295.075 UHF as the uplink and 261.475 used for the downlink." Rich also listened in on the Blue Angels performance at McGuire AFB on Memorial Day, making good use of his Grove Scanverter. Thanks for a very "Rich" contribution!

Half a dozen people sent me copies of the New York Times article, "Radio Buffs Tune in on Air Force One" by Francis X. Clines on June 10, 1982. The article profiles a Stewart Stogel, who lives in Mt. Vernon, NY and apparently collects tapes of VIP communications. There's a pretty funny picture of him staring intently at his portable receiver. More significantly, the Times ran transcripts of two conversations allegedly recorded by Stogel, one between Reagan and his chief of staff, James Baker; and between Henry Kissinger and the mother of one of his flight companions, while en-route to Sadat's funeral. The main result of Jack Anderson's publication of the Haig-Reagan conversation (see July issue) seems to have been emboldening others to violate Sec. 605 in print. As of July 1, no charges have been brought against either Anderson or Clines. As Fred Maia, editor of the W5YI Report noted: "I can't see how this can go unchallenged but I guess the red-faced administration wants to hush it all up and forget it. There are sure to be screams of 'selective enforcement' when another privacy issue comes up." Clines' article quotes Jody Powell (Carter's press sec'y) as contending "that the major networks skirt the law and routinely pack equipment to eavesdrop on Secret Service logistics and executive radio phone calls. The networks deny this, but Mr. Powell, now a columnist for The Dallas Times Herald, recalls pranks in which White House aides fabricated messages and enjoyed watching 'network correspondents abandon half-eaten dinners to chase nonexistent motorcades.'" Does anyone know if the major networks do indeed have monitors working for them? Clines' article certainly made many people aware of VIP monitoring as a hobby, which is good. But it's too bad it did so in a way that blatantly violated Sec. 605. This kind of publicity we don't need.

GOVERNMENT FREQUENCY LISTS RECENTLY CLASSIFIED.....

It is going to be harder for publishers of frequency lists to obtain frequencies used by the government. The National Telecommunications and Information Agency (NTIA) last month classified some government frequency documents. The security classification is believed to be "Confidential." These lists are primarily used by short wave listeners and scanner enthusiasts. Richard Shay, the NTIA's Chief Counsel, said that Executive Order 12065, Section 1-606, (signed by Jimmy Carter on 6/28/78 at the White House) authorizes them to classify a document (in this case, government frequencies) - even after they have received an FOIA (Freedom of Information Act) request for it. I was forwarded a copy of the Order. Shay said that not all frequency requests were being denied.... just some of them. This information had been released previously.

The above taken from Dits & Bits a.k.a. the W5YI Report, edited by Fred Maia (PO Box 10101, Dallas, TX 75207). Published on the 1st and 15th of each month, this newsletter promises "Up-to-the-minute news from the world of Amateur Radio, Personal Computing and emerging electronics"—and really delivers on that promise. Thanks to David Corsey for insisting that I subscribe. You should, too. $18 for 24 issues in North America, foreign via airmail costs $30.

I'd appreciate it if someone—preferably a government official who reads this Newsletter—could explain what the status today is of a frequency that was regarded as unclassified in April but classified in May. Is it "semi-confidential"?

An important statement of the new government policies on similar matters appeared in the July/August issue of Monitoring Times. There Richard Shay says, "There is no longer an unclassified government master file. All government frequency records are now classified. I don't know what the individual agencies will do regarding the release of their own records, but the records will no longer be released by IRAC or NTIA." Robert Cutts, Chief of the FCC's Spectrum Management Division, explains "that the technical characteristics of a frequency assignment by themselves, would not result in information that would be classified or otherwise not releasable under the Freedom of Information Act. Obviously there are exceptions to this very simplified explanation, but, in general, it is the linking of the operating agency and/or content of communications with a specific frequency assignment that determines whether an assignment would be classified or otherwise not releasable..."

Now, just because something is not releasable under the FOIA does not mean that similar information, obtained from nongovernmental sources, cannot be published. The IRS, for instance, is forbidden from releasing personal tax information requested under the FOIA, but individuals may publish the info about themselves--they may even be obliged to do so, as in the case of some public officials. So releasability under FOIA doesn't determine what is or isn't legally publishable.

However, Cutts ends his letter with a quote from Article 17 of the ITU Radio Regs (not specifying if this is the new treaty, not yet ratified by the US, or the old one): "The administrations bind themselves to take the necessary measures to prohibit and prevent... a) the unauthorized interception of radio communications not intended for the general use of the public; ...b) the divulgence of the contents, simple disclosure of the existence, publication or any use whatsoever, without authorization, of information of any nature whatever obtained by the interception..." This would seem to give the US government the right to ban the public sale of VHF/UHF scanners, under the most extreme interpretation--not to mention forbidding the "simple disclosure of the existence" of private radio communications!!

The time has come for amateur monitors to begin developing a positive rationale for monitoring, one based not on its entertainment value, but on its political and educational value--its compatibility with the basic assumptions of American society. The principle of "government by the people, for the people" requires that the public know as much about the activities and policies of public officials as possible--limited only by considerations of protecting the privacy of those who have given information about themselves to the government under penalty of law, and of protecting the security of the nation from identifiable harm. I believe that the public's right to know how the public's business is being conducted is fundamental. The burden of proof that harm to the national security will result from the disclosure of information rests squarely on the government's shoulders. Neither Richard Shay nor Robert Cutts offered any justification for the reclassification of government frequencies. And as Rick Prelinger points out in that same issue of MT, "No distinction was made between sensitive FBI frequencies used in counterintelligence operations and FAA channels used for air traffic control, Forest Service firefighting frequencies, frequencies used for paging at VA hospitals, or even the NWS weather stations!"

We have seen how government claims of secrecy in the name of "national security" have been abused too recently to accept this new policy without protest. The April issue of First Principles (published by the Center for National Security Studies, 122 Maryland Ave. NE, Washington, DC 20002) tells of another reclassification case: "The Justice Department is demanding the return of some unspecified portions of 250 pages of documents concerning domestic spying by the National Security Agency which were released to author James Bamford in 1979 under the FOIA... One of the documents is a report on the Justice Department's 1975-76 study of illegal NSA spying on anti-war and civil rights leaders in the 1960s and early 1970s... One passage in the documents thought to be particularly sensitive notes that Britain's electronic intelligence agency, the Government Communications Headquarters, intercepted electronic communications in the United States and provided the results to American intelligence officials, a procedure which allowed US agencies to circumvent legal prohibitions on intercepting purely domestic communications." See the NY Times March 14 & 15, 1982 and the Boston Globe, March 15 for more on this case. Private monitoring is more than an exciting hobby. It's a way of ensuring that we have an open and honest government. I worry a lot less about buyers of Grove's Federal Frequency Directory listening to gov't channels that I do about Big Brother listening to everyone else.

As before, the opinions expressed are my own, not RCMA's leadership's. Correction for previous page: that fellow's name is spelled David Coursey, of corse!

RCMA President Larry Smith (MI-001) sent a puzzling list of domestic HF assignments for transmitters in Detroit. I didn't know that public services could use HF for local operations. Are there similar assignments for other US cities? Larry says he's never heard these channels being used, though they're in the FCC fiche:

1.950	KDV6	Trans World Airlines	7.805	KQB49	City of Detroit
1.950	WRLT4750	Northwest Airlines	7.935	"	"
1.950	WRLT4770	Trans World Airlines	27.235	KBK762	Security Services Inc.
2.804	KQB49	City of Detroit	27.265	KXX324	City of Detroit
2.808	"	"	"	KYG637	"
2.812	"	"	"	KYG638	"
5.135	"	"	"	KYK479	"
5.140	"	"	"	KZF854	"
5.195	"	"	27.275	KTN377	Mt. Carmel Mercy Hosp.
7.480	"	"	27.470	KBM896	Clafton and Keating

Is RTTY Worth the Cost of the Equipment?

Three letters came on this subject, all saying YES! Mike Agner (MA-066) wrote: "RTTY DXing is something completely different from voice (and to a certain extent CW) ute DXing in that not everything you find is readable. Sometimes it is in any one of dozens of languages (it helps to be fluent in more than one language); other times it is in cipher... The point is this--part of the challenge of RTTY DXing is finding something that is readable. To many this seems like a Herculean task, but for others it is, as I say, a challenge. When you find something that is readable, you stick with it because you never know what it is you will hear. For example, the most interesting tfc I have copied has to do with a major international organization attempting to find a fleeing fugitive at sea. ...if you know a DXer or amateur with RTTY gear, why not ask for a demonstration? That way, you can use their gear and see whether you like it or not. This is the way I got into this facet of our diverse hobby. Do I think the investment I made for my gear was worth it? Yes, quite emphatically. But the person buying his or her RTTY gear should know what he/she is getting into, as RTTY is definitely not for everyone..." Mike also notes that equipment prices are slowly coming down, and so may not be as much of an obstacle in years ahead.

J. R. Koesman (IND-001) writes from Bogor, Indonesia, that "in this part of the world [short wave] is certainly a type of life-line, so people automatically are interested in listening to other activities in this range. Thru the contents of the column I have acquired a Yaesu RTTY demodulator & video viewer, apart from my present FRG-7700, to be able to enjoy what is available, other than normal broadcasts. One of the first results is that I am now able to follow world news thru AFP [Agence France Presse] and UPI nearly throughout the whole day, from 2300 to 1500 UTC, when my eyes fall shut..."

Ron Pokatiloff (IL-083) adds: "I have just purchased the Kantronics MiniReader for $249. What am I getting? 1) A 24-hr clock--very valuable. 2) A code reader --DXing CW is effortless and very enjoyable... Also you can learn to send/receive code with this unit (learning code is necessary because the reader cannot read very weak signals). 3) The Kantronics unit reads RTTY and computer code (100 wpm takes a little time to get used to). In closing I will mention that the bandwidths for CW & RTTY are from about 20 to 1200 Hz--with an audio filter. This means good DX. Buy one of these readers and get with it!!"

Some final items: George Dubois sends some Falklands-related notes from the IFR Supplement: Stanley airfield--2.966 5.547 10.081 "needless to say they aren't confirmed" George adds modestly. And we note with mixed emotion the world's first official direct-dialed telephone call to a ship at sea, on Feb 22, 1982. Reported in the Aftenposten of Oslo, Norway, the following day. The call originated at Eik, Rogaland (in Norway), to the Berge Enterprise in the waters off Angola. Transport and Communications Minister Inger Koppernaes made the historic call to inaugurate the "world's first completely automatic and Europe's first shore-to-ship station. It took only several seconds from the time she lifted the receiver and dialed a 13-digit number before Capt. Johan Skorge and Kjell Lorentzen on the 350,000 ton Berge Enterprise were on the line." The call went by INMARSAT. It's only a matter of time before AT&T also switches to satellite, abandoning HF. Speaking of abandon, I've gotta run. This column is twice usual length because I'm taking next month off. See you again in "November"!

Business, Etc.

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufactureers, news media (behind-the-scenes radio, TV & newspaper), motion picture industry, security (private patrol, detective agencies, campus security & police, amusement park & stadium security, shopping center & mall security, plant/business/hotel security, etc.), General Mobile Radio Service (GMRS), mobile phone/RCC & paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private & municipal water, power, electric, gas, telephone, etc.), and all school & college related frequencies. Send information and questions perfaining to the radio services covered in this column to:

Larry Smith, 1223 Vinsetta Blvd., Royal Oak, MI 48067.

GREETINGS TO ALL AND WELCOME TO ANOTHER BUSINESS, ECT. COLUMN. AT THIS WRITING, THE LATTER PART OF JUNE I HAVE RECEIVED A FEW LETTERS FROM MEMBERS ALONG WITH THEIR MATERIAL WONDERING WHY THEIR WORKS HAVE NOT APPEARD AS OF YET. THIS COLUMN IS DIFFERENT THAN THE REST AS IT IS NOT DATED LIKE THE REST. FOR SOME COLUMNS WHAT MATERIAL IS SENT INTO THE MANAGING EDITORS HANDS APPEARS SOON AFTER, BUT WITH MINE [THE BUSINESS COLUMN] THE MANAGING EDITOR STILL GETS THE MATERIAL BUT CAN BE PUT IN THE NEWSLETTER AT ANY TIME... UNLESS IT HAS TO DO WITH AN EVENT COMING UP SOON, THEN THAT ARTICLE IS RUN AS SOON AS POSSIBLE. WITH THIS MONTH'S ARTICLE I AM SENDING ALONG A HUGE AMOUNT OF MATERIAL SENT TO ME AND MORE WILL BE BE HEADING FOR CALIFORNIA REAL SOON. JUST BE PATIENT FOLKS AS I KNOW YOU WANT TO SEE YOUR WORKS IN PRINT AS WE ALL DO. IT WILL SHOW UP IN DUE TIME.

SINCE MOST OF YOU HAVE BEEN SO KIND TO "TYPE" YOUR OFFERINGS, I HAVE DECIDED TO DO SOMETHING NO OTHER EDITOR EITHER TRIED BEFORE OR EVEN GAVE IT SOME THOUGHT. I SEE ALL OF YOU HAVE PUT ALOT OF TIME INTO THESE LISTS AND IT WOULD BE EVEN MORE TIME SPENT REDOING IT WITH MY TYPEWRITER IS A PARTICULAR FORMAT, SO I AM GOING TO TRY AND SUBMIT YOUR MATERIAL AS IT WAS RECEIVED BY ME. SEEING YOUR OWN STYLE YOU CAN RECOGNIZE IT FASTER.

DEPENDING ON HOW MUCH SPACE WE HAVE IN THE NEWSLETTER FOR EACH COLUMN [SOME HAVE COMPLAINED THE BOOK IS GETTING TOO BIG AND TAKES TOO LONG TO READ] I'LL LEAVE IT UP TO CAROL RUTH [OUR MANAGING EDITOR] TO SUBMIT AS MUCH AS POSSIBLE UNTIL I GET CAUGHT UP, THIS WAY ALOT OF YOU WILL BE HAPPIER.

THANKS MUCH ALL OF YOU FOR TAKING TIME OUT FOR ALL THE WORK YOU HAVE PUT INTO YOUR PROJECTS AND HOPE OTHERS IN THE CLUB FIND TIME TO CORRESPOND WITH YOU IN HOPES OF GETTING MORE MEANING OUT OF THE HOBBY.

REGARDS,

LARRY [MI-001]

UTILITIES MARK [IN-014]

47.90	KSB 945	Wabash County Rural Electric (base)
48.10		" " " " (mobile)
48.46	KSB 532	Public Service of Indiana- Wabash (base)
"	KSB 313	" " " " - Kokomo
"	KSB 909	" " " " - Huntington
48.54	?	" " " " - mobiles
153.440	KSI 778	Kokomo Public Water Utility (Kokomo)
153.500	?	Peru City Utilities (Water and Electric)
153.560	KDX 268	Northern Indiana Public Service Co.- Wabash
"	KSC 930	N.I.P.S.Co. - Peru
153.590	KSC 955	Anderson City Electric Utility (Repeater)
158.160	KCX 927	N.I.P.S.Co. - Columbia City
"	KSB 378	" - Fort Wayne

451.025	KIR 282	Miami-Cass County Rural Electric - Peru
451.200	?	Indiana Cities Water Co. - Wabash
451.350	KRG 236	General Telephone of Indiana - Logansport
451.450	WDH 92	" " " " - Wabash
173.350	KBH 500	Kokomo Gas & Fuel Co. (sorry I got out of order)

TAXI

152.270	?	Renne's Cab - Peru (157.530 mobiles)
152.330	?	Doss Cab - Peru (157.590 mobiles)
152.390	?	Bee Line Cab - Marion (157.650 mobiles)
"	?	City Cab - Kokomo " "
"	?	R-D Cab - Wabash " "

WRECKERS

35.98	?	Blackman's Wrecker - Peru
157.470	KWO 679	H & K Wrecker Service - North Manchester
157.470	KZZ 414	McCoy's Wrecker - Peru
157.500	KVS 809	Oldaker & Sons Wrecker - Peru
157.560	?	South Side Wrecker Service - Wabash
157.485	?	Hefner's Emergency Towing - Ft. Wayne

BUSINESS

151.565	KCR 484	Eppley Farms, Inc. - Wabash
"	KCU 454	Wabash County Farm Bureau - Wabash
151.655	?	Wabash Alloys, Inc. - Wabash
151.715	KKQ 316	Quality Electric, Inc. - Wabash
151.775	KAT 366	Wabash Answering Service - Wabash
"	KUF 300	Wabash Valley Feed Service - Wabash
"	KUK 318	Rich's TV and Appliances - Wabash
151.805	KKQ 227	Moore & Pilgrim Animal Hospital - Wabash
151.865	KFW 733	Servisoft Water Conditioning- Marion
151.895	KBM 603	McKinney Appliance & Electronics- Wabash
152.300	KTY 300	Wabash Valley Reclamation Service- Wabash
152.360	?	Gaunt & Son Construction & Asphalt- Wabash
152.420	KTJ 997	Howard Two-Way Radio, Inc.- Wabash
"	KWX 209	Metropolitan School Dist. of Wabash County
"	WQT 324	Kellam Excavating, Inc. - Wabash
"	?	Southwick Well & Pump - Wabash
152.960	KFY 305	Reynold's Amoco Fuel Oil Co. - Wabash
154.515	KXB 342	Motorola Emergency Radio Service - Kokomo
"	?	Thermogas, Inc. - Peru
154.540	KTY 275	Duke's Hospital Ambulance Service- Peru
"	KZA 259	Electronic Security Protection Alarm Svc-Wabash
"	KNCJ682	Howard Community Ambulance Svc.- Kokomo
"	?	Manchester College - North Manchester
157.680	KDB 526	Myers Servisoft, Inc. - Wabash
461.800	KFG 961	North Eastern Construction - Ft. Wayne
461.875	WSE 919	Hendrickson Distributin - Wabash
"	WT 1390	Urschel Trash Removal - Wabash
"	?	Countyline Farms, Inc. - Lafountain
"	?	Hoosier Grain - Upland
463.475	KU 6199	Kokomo Land Mobile Radio (GE) - Kokomo
463.575	KSR 557	Cox Cable-Peru
"	KSR 558	Cox Cable- Wabash
463.750	?	Abe Sposeep & Sons Scrap Metal - Wabash
"	?	Urbana LP Gas - Urbana

Toledo,Ohio Television Stations

WTOL-TV	Channel 11	450,250 Mhz.*	Call Sign ?	TV News Dept.
WTVG-TV	Channel 13	161.730 Mhz.**	KDM 890 (B) KY 2965 (M)	TV News Dept.

* Repeater Out
** Simplex (Police Call listing is KOB 513; may be renewed as KOB 513)

Columbus,Ohio Television Stations

WCMH-TV	Channel 4	450.150 Mhz.*	Call Sign ?	TV News Dept.
WTVN-TV	Channel 6	450.250 Mhz.* 450.350 Mhz.*	Call Sign ? Call Sign ?	Radio/TV News Dept. TV News Dept.
WBNS-TV	Channel 10	450.2125 Mhz.** 450.4125 Mhz.**	KXZ 925 KXZ 926	TV News Dept. TV Engineering (Technical setup for RapidCam & SkyCam remote feeds)

* Simplex
** Repeater Out (This set of frequencies is very busy especially since the addition of a helicopter to the News department.)

DAVID OH-127

MICHIGAN CITIES
(Q) REPORTERS - PRESS RELAY

SERVICE	CITY	CALL SIGN	FREQ.	BASE	MOBILE	OTHERS
DETROIT SUBURBAN PRESS	DETROIT	KQE512	173.275	1	0	0
	DETROIT	KA9813	173.225	0	3	0
BOOTH NEWSPAPER	FLINT	KQJ610	173.325	1	35	0
	MUSKEGON	WSJ227	173.325	1	40	0
EVENING NEWS ASSN.	SOUTHFIELD	KVX238	453.000	0	0	1 MR
	DETROIT	WAB379	458.000	0	0	1 CO
	DETROIT	KR8260	458.000	0	30	0
KNIGHT NEWSPAPER INC.	DETROIT	KQD926	173.225	1	15	0
MACOMB PUBLISHING INC.	MT.CLEMENS	WYL753	452.975	0	0	1 MR
OAKLAND PRESS	PONTIAC	KCJ938	173.375	1	0	0
YPSILANTI PRESS INC.	YPSILANTI	KGH619	173.225	1	11	1 HH

*CODES: MR = MOBILE RELAY
CO = CONTROL (TO MR OR BR)
BR = BASE AND MOBILE RELAY CONBINED
HH = HAND HELD

PAUL ROSTOW (MI-050)
23220 beverly
ST.CLAIR SHORES, MI
48082

FROM ALLAN [CT-055]:

METRO CABLE TV FIRMS

FREQUENCY	ALLOCATION
35.980	CINE TV Brooklyn
461.375	US Cable TV Beacon NY
464.350	Teleprompter Cable TV Mt. Vernon NY
471.9375	UA Columbia Cablevision of NJ Oakland & West Patterson NJ

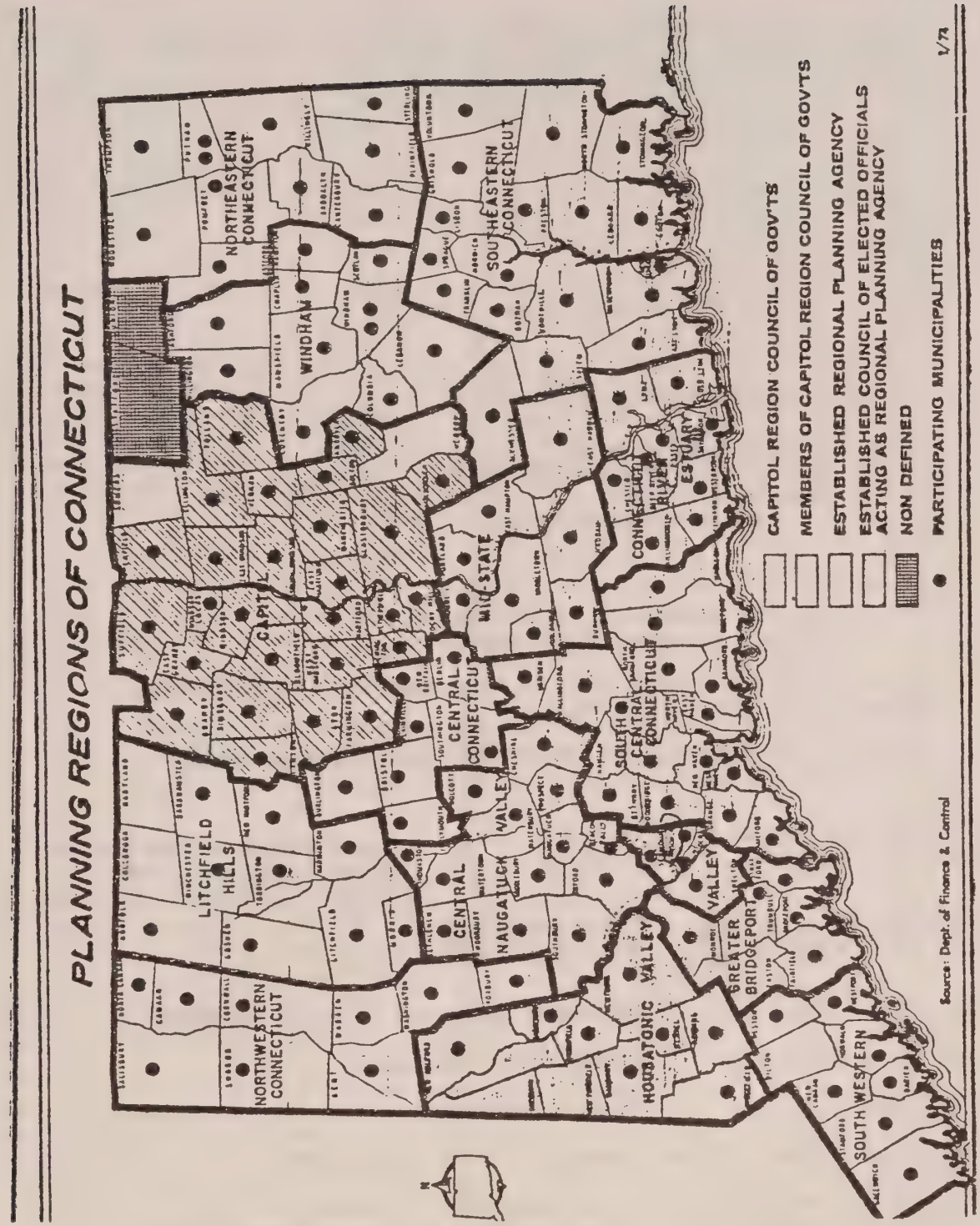
NYC HIGHWAY MAINTAINENCE

470.3125 - 471.4125
476.3125 - 477.4125

ADDITIONAL NY FREQUENCIES

FREQUENCY	CALLSIGN	ALLOCATION
151.685	KYH-290	NY Racing Association(Aqueduct Raceway)
	KCB-864	Sotheby Parke Bernet Galleries
151.715	KCB-864	" " " "
151.775	KRV-732	NY Public Library
154.540	KBS-260	Rockerfeller Center
154.570	KAL-965	NY Zoological Society
154.600	KAL-965	" " "
154.740	WXU-228	Metropolitan Museum(Paging)
158.460	WXF-448	Brooklyn Museum(Paging)
464.425	WXF-400	Metropolitan Museum
463.300		Unification Church Beacon NY & NYC
452.975		Cable Network News NYC
35.900	WXW-907	Associated Press
151.715	KJB-463	American Broadcasting Co. NYC
151.745	KKK-697	CBS Inc. NYC
151.865	WYK-733	Dunn & Bradstreet Inc.
151.895	KGB-416	Chemical Bank
	KYR-911	" "
	KYR-912	" "
154.625	KME-991	American Stock Exchange
158.460	WRI-531	Fortunoff(Paging)
	WYJ-493	NY Stock Exchange(Paging)
159.420	WZU-487	NY Stock Exchange(Forestry Frequency??)
461.075	KSK-720	E.F.Hutton Inc.
464.050	KIJ-832	Citibank of N.A.
464.125	KSH-368	Chemical Bank
	WYK-897	Citibank of N.A.
464.225		Citicorp
464.350	KKD-785	NY Stock Exchange
464.425	KRW-840	First National City Bank(Citibank)
464.475	KJX-487	Morgan Guaranty Trust
452.975		Shadow Traffic Network(Old: 462.550)
450.925		Air West(Old: 452.975)
450.925		Shadow Base Copter(Also:450.650)WBRW?
463.400		Broadcast News Service Metro NY

TERRITORY COVERED BY ELECTRIC COMPANIES
IN CONNECTICUT
CONNECTICUT LIGHT & POWER CO.
HARTFORD ELECTRIC LIGHT CO.
UNITED ILLUMINATING CO.
BOZRAH LIGHT & POWER CO.
MUNICIPALS
1/



FROM: Neal CA-LA-385
Southern California Gas Co.

153.410 Aliso Canyon (Northridge) gas storage.
153.455 Beverly Hills, W. Hollywood.
153.470 Hollywood.
153.485 Compton.
153.515 San Fernando Valley, Ventura Co.
153.530 Monrovia, Pasadena, Alahambra.
153.560 Glendale.

153.605 City of Commerce, La Mirada (KGU 736).
451.050 Burbank, Pasadena, street main units.
451.075 street mains and Aliso Canyon. (WQI 932)
451.125 San fernando valley street mains(WBB 933)

Southern California Edison Co.

153.710 South Bay
158.130 Alhambra
158.145 Long Beach
158.175 Ventura Co. (KBS 504)
158.190 ?????
158.205 West Covina (KBA 891)
158.220 Santa Ana
158.250 Compton

Southern California Utility Depts.

47.980 Glendale Water & Power
153.590 Beverly Hills Public Services
153.650 Pasadena Water Dept.
451.050 Burbank Public Service Dept.

Freak Freqs.

153.725 unidentified studio (KZH 794)
154.540 Universal City Plaza Paging and Security. (KQZ 539)

[Ed. Note: 153.725 KZH-794 SHOWS UP ON MICROFICHE AS SOUTHERN CALIF. UTILITY OF SOME SORT, NOT A STUDIO]

THANKS NEAL FOR YOUR EFFORTS, SORRY THERE WAS SUCH A LONG DELAY GETTING THIS IN PRINT.

Chicago Area Shopping Centers

Compiled for RCMA/Chicago by
Michael Yanul (IL-014)
and Martin Toomajian (IL-139)

151.8950	(KZA-295)		Waukegan Shopping Plaza - Waukegan
151.9250	(KTI-315)		Lakehurst - Waukegan
*154.5700			Ford City Shopping Center - Chicago
464.3750	(KJN-351)	(R)	Randhurst - Mt. Prospect
*464.4750	(KVA-276)	(R)	Brickyard Mall - Chicago
*464.4750	(KNBE644)		Chicago Ridge Mall - Chicago Ridge
464.5250	(WSJ-309)		Harlem-Irving Plaza - Norridge
464.6750	(KZP-575)		Fox Valley - Aurora
*464.7750	(KYT-988)		North Riverside Park - North Riverside
464.8750	(KEJ-288)		Oakbrook Center - Oakbrook
464.8750	(KNAI807)	(R)	Hawthorn Center - Vernon Hills
464.8750	(KSN-797)		River Oaks - Calumet City
464.8750	(KUP-494)		Old Orchard - Skokie

*464.8750	(KXV-735)		Jefferson Square - Joliet
464.8750	(WQQ-735)	(R)	Stratford Square Mall - Bloomingdale
*464.9250	(KKI-616)		Yorktown - Lombard
*464.9250	(KVM-473)	(R)	Woodfield Mall - Schaumburg
*464.9750	(KUU-264)	(R)	Lincoln Mall - Matteson
*464.9750	(KXT-820)	(R)	Evergreen Plaza - Evergreen Park
*464.9750			Spring Hill Mall - West Dundee

*Denotes frequency has been monitored and verified.

Frequencies for the following are needed: Water Tower Place, Northbrook Court, , Golf Mill, Louis Joliet Mall, Orland Square, Orland Court.

Please send corrections, additions and verification reports to Michael Yanul, 5601 S. St. Louis Ave., Chicago, IL. 60629.

CANADA

Send Canadian frequency information, radio system details and other information relating to Canadian monitor radio listening and questions to:
Robert Berezowski, 5832 Dalhousie Drive NW, Calgary, Alberta T3A 1T1 Canada.

Well people, welcome to this month's column. It's summer time in the city. Time to enjoy life, to relax in the yard during the afternoon, to relax at a good movie in the evening, and for those enthusiasts like ourselves, a good chance to relax beside our radio receivers. At least that is the way it is supposed to be. I hope you have all had a good month. For me it has been a good month. Just a question of interest to you: why do you suppose that there are very few young ladies interested in our hobby?

To start off this month's parade, I have a question for the general membership. Does anyone know of any radio frequencies used by Ministry of Transport air accident investigation teams? I do not know if the teams are equipped with any radios, but if they are, the communications could be interesting. The reason I ask is that last night I was listening to the RCMP enroute to the scene of an accident involving a Cessna. The MOT had not arrived on the scene when I turned it off. Indeed, they were expected the next morning. Does anyone know what frequencies they might use?

Jerome (CAN-035) sent in a copy of an article that appeared in the Toronto Star on May 6, 1982. The article appeared on the front page and deals with the accuracy of police radar. It is quite an extensive article, but says that the accuracy of the unit varies greatly on the circumstances of the reading and the level of training of the officer. Some good information is presented in the article, and would be of interest to some. It is not directly related to our hobby, but I thought I would print a notice.

I received a letter from Harry (CAN-074). He has sent some new frequencies for the Edmonton Fire Dept. and the Edmonton Ambulance Authority. On Dec 9, 1981, the EFD changed over to their new UHF system. The mobiles and portable radios are General Electric models. The mobiles have a 12 channel capability. The EFD have installed repeaters in 9 towers in the city, and all District Chief cars are equipped with mobile repeaters for use on the tactical channels (listed below). All the fire stations are equipped with teleprinters, receiving data over the air on 413.0375. The calls are also dispatched over the Dispatch channels. The mobiles are also equipped with data heads and status keys. These keys send the following messages to the dispatcher: Enroute, At Scene, In Service, At Hall, Out of Service, Available on Air, Require Police, Require Ambulance, Require Fire Investigator.

Edmonton Fire Dept.

1. 413.1125/418.1125in Dispatch) Paired
2. 413.1625/418.1625in Dispatch)
3. 413.7875/418.7875in Tactical
4. 413.8375/418.8375in Tactical
5. 413.8625/418.8625in Tactical
6. 413.9625/418.9625in Tactical

413.0375/418.0375in Data-Fire Halls

The Edmonton Ambulance Authority recently took over responsibility for the city from Smith's Ambulance. They use both Basic Life Support (BLS) and Advanced Life Support (ALS) units. 21 Ambulances are used, manned by Paramedics. Unlike the Calgary Ambulance Service, the Edmonton Ambulance Authority is not under the control of the Fire Dept.

Edmonton Ambulance Authority

1. 413.5625/418.5625in Tactical
2. 413.6875/418.6875in PM to Hospital
3. 413.2125/418.2125in Tactical
4. 413.9125/418.9125in Dispatch

Guy (CAN-031) has sent me a list of interesting miscellaneous frequencies. Here is an excerpt from that list.

151.595	St Leonard, PQ	Govt of Canada
168.480/164.460	Ottawa, Ont.	Auditor General of Cda
151.115	Ottawa, Ont.	Cda Dept of Finance
170.820	Ottawa, Ont.	Treasury Board
143.895/148.885	Ottawa, Ont.	Bank of Canada
150.665	Calgary, Alta	" " "
151.055	Vancouver, BC	" " "
"	Regina, Sask	" " "
"	Toronto, ont	" " "
"	Halifax, NS	" " "
151.715	Ottawa, Ont	" " "
153.380	" "	" " "
158.400	St John, NB	" " "
159.450	Winnipeg, Man	" " "
164.145	Ottawa, Ont	" " "
151.655	Ottawa, Ont.	Royal Canadian Mint
153.620	Ottawa, Ont	" " "
155.670	Winnipeg, Man	" " "
155.820	Winnipeg, Man	" " "
172.110	Ottawa, Ont	Cdn Bank Note Co. Ltd
166.710	Montreal, PQ	Bank of Montreal
163.260	Toronto, Ont	" " "
456.7875	" "	" " "
460.1875/465.1875	" "	" " "
" "	Scarborough, Ont	" " "
" "	Willowdale, Ont	" " "
464.350	Montreal, PQ	" " "
172.980	Toronto, Ont	Bank of Nova Scotia
458.450/453.550	" "	" " " "

Canada continued

148.075	Montreal, PQ	Royal Bank of Canada
170.700	Vancouver, BC	" " " "
463.8125/468.8125	Toronto, Ont	" " " "
172.980	Toronto, Ont	Toronto-Dominion Bank
173.880	Ottawa, Ont	Supreme Court of Canada
172.170	" "	House of Commons-Elec.
172.680	" "	" " " "
172.860	" "	" " " -Broad.
410.5875/415.5875	" "	" " " -Security
411.0625	" "	" " " "
411.0875	" "	" " " "
411.1875/416.1875	" "	" " " "

(Elec.-Electronics)
(Broad.-Broadcasting)

I will have more excerpts from Guy's list later. To finish off this month's column, I have two items. One is a list of Toronto frequencies sent in by Bruce (CAN-019). The other is a list of frequencies for British Columbia sent in by Myron (CAN-057). Many thanks to both of these members.

For me, I must again pack up my typewriter and disappear into the Twilight Zone. As I type this last line, I see that the weather this evening is nice and warm. Tomorrow I will try to get some sun, with my BC 100 of course. Until next month, happy monitoring.

BRITISH COLUMBIA

PROVINCE WIDE

155.22	FISH & GAME WARDENS	164.19	FLYING FIRE TANKERS
155.46	FIRE MARSHELS DEPARTMENT	156.09	FEDERAL PRISONS
484.55	DEPARTMENT OF HUMAN RESOURSES	151.475	PROVINCIAL PRISONS
154.86	SHERIFF'S DEPARTMENT	151.475	SOLICITOR GENERAL
143.295	HIGHWAY REPAIR CREWS	149.11	AMBULANCE SERVICE
143.415	HIGHWAY REPAIR CREWS	149.44	AMBULANCE SERVICE
143.445	HIGHWAY REPAIR CREWS	149.59	AMBULANCE SERVICE
143.715	HIGHWAY REPAIR CREWS	149.68	AMBULANCE SERVICE
143.895	HIGHWAY REPAIR CREWS	149.83	AMBULANCE SERVICE
153.74	HIGHWAY-BRIDGE & TUNNEL PATROLS	149.89	AMBULANCE SERVICE

CIVIL DEFENSE

149.525	CIVIL DEFENSE OPERATIONS F1
148.655	CIVIL DEFENSE OPERATIONS F2
148.685	CIVIL DEFENSE OPERATIONS F3
149.495	CIVIL DEFENSE OPERATIONS F4

BRITISH COLUMBIA HAMS

145.20	BURNABY DATA TRANSMISSION VE7 CIM		
145.41	VICTORIA VE7 BEL	147.00	CHILLIWAK VE7 ELK
146.64	NANIAMO VE7 ISC	147.03	VANCOUVER VE7 RAG
146.70	DELTA VE7 RTY	147.12	VANCOUVER VE7 VAN
146.79	MAPLE RIDGE VE7 MRR	147.18	PORT COQUITLAM VE7 FVR
146.85	VICTORIA VE7 VIC	147.21	VANCOUVER VE7 ESR
147.33	SALT SPRING ISLAND VE7 URG	147.24	VANCOUVER VE7 RAC
444.00	WEST VANCOUVER VE7 URG	146.94	VANCOUVER VE7 RPT
		146.94	KAMLOOPS VE7 KAR

TORONTO AREA FREQUENCIES

EMERGENCY SERVICES

POLICE

42.000*	O.P.P. W.T. Air to Ground
42.060*	O.P.P. #5 District Bases & Common Car to Car
42.220*	O.P.P. Mobiles to 42.060
155.490*	Toronto Harbour Police - XJG 52

Metro Toronto Police - XJF 72

142.035* R	142.695* R	142.995* R	
142.065* R	142.725* R	148.855 B/155.850 M	Division 1
142.125* R	142.770*	148.495 B/155.000 M	Division 2
142.155* R	142.875* R	156.240 B/159.300 M	Division 3 XJK 741
142.305* R	142.905* R	155.550 B/159.180 M	Division 4
142.335* R	142.965* R	155.400 B/158.895 M	Division 5 XJF 902 - 8

412.2125	XJK 737
412.2875	XJK 738
412.3625	XJK 739
412.8875	XJK 740

R.C.M.P. - Metro Area

140.190	Ch 1	140.580	Ch 5
140.310	Ch 2	140.730	Ch 6
140.400	Ch 3		Ch 7
140.490	Ch 4		Ch 8
413.0625	Toronto International Airport		
413.2875	Toronto International Airport		

FIRE

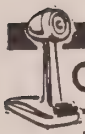
153.950*	Toronto Dispatch XJG 68
153.980*	Toronto Portables
154.070*	ONTARIO FIRE MARSHAL - XMY 838 PROVINCIAL COMMON
154.190*	ONTARIO FIRE MARSHAL - Ch 2
410.3125	ONTARIO FIRE MARSHAL
153.770*	East York Fire - XJK 45
154.400*	East York Fire (new)
153.830*	North York Fire XJI 78
153.395	North York Fire XJL 421

154.325* Etobicoke Fire - XJJ 55
154.310 Etobicoke Fire ?
154.430* Scarborough Fire - XJG 87
153.630 Scarborough Fire
154.890* York Fire - XJF 89
154.950* Mississauga Fire XJK 27
154.235* Mississauga Fire - Ch 2
153.770* York Region Fire - XJF 290
154.800 Peel Region Fire - XJH 275

NOTE: Toronto Fire Department is about to change their frequencies to a seven channel U.H.F. system. They will then relinquish their V.H.F. Frequencies. The above noted O.F.M. frequency is the only one reported as of this date.

410.8125 Toronto Transportation Commission
411.6125 Mississauga Buses

(02/82)



COMMUNICATIONS PROFILE

RCMA Asst. Editor, 1 West Potomac, Williamsport, MD 21795

This column is for special projects that explain various radio systems in detail. Frequencies and radio codes of not only municipal agencies and certain federal government agencies may be listed, but also large businesses and corporations. The contribution must be lengthy enough that publishing it in one of the regular columns would not be possible. If you are inclined to submit a report as the one below appears, please follow No. 8 in the inside front cover of the Newsletter.

COMMUNICATIONS PROFILE OF PRINCE GEORGE'S CO., MD. POLICE DEPT.

Contributed by Joe E. Lewis (MD-015)

The command staff of the Department utilizes the two digit number system. This includes Office of the Chief, Command Officers, Division Commanders/ OIC's administrative assistants, and District Supervisors. County officials will also utilize the two-digit number. Cadets will use the 1200 series.

All other units or officers utilize a letter and number.

Patrol Sectors have a letter:

District I -- A-B-C
District II -- D-E
District III -- G-H
District IV -- J-K

Sector cars only will utilize the prefix numbers 1, 2, and 3 to denote the watch they are working. They correspond respectively to 11p-7a, 7a-3p and 3p-11p. Prefix No. 4 is used to denote sector cars and District Supervisors who are held over or called back to duty.

B.C.I. sections will use the letters M,R,P,O,Y,and V. All administrative and staff related personnel use the prefix letter S.

Prince George's County uses the phonetic alphabet in the event of radio call names and words being transmitted.

Prince George's County Police

Mobile Radio Call Numbers

Police Department Command Staff

Car Number

1. Chief of Police
2. Assist. Chief of Police for Operations
3. Assist. Chief of Police for Adm. & Service
4. Bureau of Patrol Commander
5. Bureau of Technical Services Commander
6. BCI Commander
7. Bureau of Adm. Services Commander
8. Executive Assistant
9. Training & Education Div. Commander
10. Community Relations Div. Commander
11. District I Commander
12. District II Commander
13. District III Commander
14. District IV Commander
15. Records & ID Div. Commander
16. Communications Division Commander
17. SOD Division Commander
18. BCI Special Enforcement Div. Commander
19. BCI Major Crimes Div. Commander
20. Property Division Commander
21. Inspectional Services Div. Commander
22. Admin. Assist. For Operations.
23. Admin. Assist. For Adm. & Services
24. Research & Development Div. OIC
25. Personnel Division OIC
25. Central Services Div. OIC

County Officials

Car Number:

50. Executive
51. Councilman
52. Executive Aide
53. Chief Administrative Officer
54. State's Attorney
55.
56.
57.
58.
59.
60. Chaplain (Catholic)
61. Chaplain (Protestant)
63. Medical Examiner
64. Radio Repairman
65. Associate Director of Parks
66.
67. Board of Education, Security
68. " " " " " "
69. " " " " " "

OPERATIONS

Assistant Chief of Police for Operations	Car 2
Administrative Assistant for Operations	Car 22
Operations Staff Officer	Car 40 (all watches)
Operations Staff NCO	S-2
Operations Staff NCO	S-20
Court Liaison (State's Attorney Office)	S-21

BUREAU OF PATROL

Commander	Car 4
Patrol Staff NCO	S-4
Patrol Staff NCO	S-40

DISTRICT COMMAND

District I Command	Car 11	District II Commander	Car 12
" Supervisor	Car 41	District II Supervisor	Car 42
" " Staff NCO	S-11	District II Staff NCO	S-12
District III Commander	Car 13	District IV Commander	Car 14
District III Supervisor	Car 43	District IV Supervisor	Car 44
District III Staff NCO	S-13	District IV Staff NCO	S-14

DISTRICT SUPERVISORS
Numbers remain the same each watch car 41, 42, 43 and 44

Sector Cars - (Numbers change by watch)

Prefix Nox 1 - 1st watch 2300 - 0700
Prefix No. 2 - 2nd watch 0700 - 1500
Prefix No. 3 - 3rd watch 1500 - 2300
Prefix Nox 4 - Shift call back or hold over (Includes District Sup.)

Each sector has a letter-	Hyattsville	Sectors A, B, and C
	Bowie/Marlboro	Sectors D, and E
	Seat Pleasant	Sectors G, and H
	Oxon Hill	Sectors J, and K

Example 1-A-1 = 1st watch setor "A", 1st beat

District I Sector Cars

Sector A - Sergeant - A-10, Beat Cars A-1, A-2, A-3, A-4, A-5, A-6, Etc
Sector "B" Sergeant - B-10 Beat Cars B-1, B-2, B-3, etc.
Sector "C" Sergeant - C-10, Beat Cars C-1, C-2, C-3, etc.

DISTRICT I - Tactical Units (Number is determined by the Sector the unit is working)

Sector A - A-30 to A-49
Sector B - B-30 to B-49
Sector C - C-30 to C-49

DISTRICT II - Sector Cars

Sector "D" Sergeant D-10 BeatCars D-1, D-2, D-3 etc.
Sector "C" Sergeant E-10 Beat Cars E-1 E-2, E-3, etc.

DISTRICT II - Sector Cars

Sector "G" Sergeant G-10, Beat Cars G-1, G-2, G-3, etc.
Sector "H" Sergeant H-10, Beat Cars H-1, H-2, H-3, etc.

DISTRICT III Tactical Units

Sector G -G-30 - G-49
Sector H - H-30 - H-49

DISTRICT IV - Sector Cars

Sector "J" Sergeant J-10 Beat Cars J-1, j-2, J-3, etc.
Sector "K" Sergeant K-10 Beat Cars K-1, K-2, K-3, etc.
District IV Tactical Units Sector J - J-30 - J-49
Sector K - K-30 to K-49

MULTIPURPOSE WAGONS

Wagon 1, Wagon 2, Wagon 3, Wagon 4

District Station Cadet

Hyattsville-- 1204
Bowie/Marlboro-- 1205
Se t Pleasant -- 1206
Oxon Hill -- 1207

SPECIAL OPERATIONS DIVISION

(S. O.D. will use the letter"T"
as a prefix, except for traffic cars)

Commander	Car 17
Tactical Unit O.I.C.	T-1
" " " " "	T-2
S.O.D. - NCO	T-3

Tactical Squad I

T-10 -- Sergeant and T-11 through T-24

Tactical Squad II

T-20 -- Sergeant and T-21 through T-29

Tactieal Squad III

T-30 -- Sergeant and T-31 through T-39

Tactical Squad IV

T-40 -- Sergeant and T-41 through T-50

Auto Theft Unit

T-70 -- NCO, T-71, T-72, and T-73

Canine (K -9) Section

T-100 -- O.I.C.
T-110 -- Sergeant and T-101 through T-117

Traffic Enforcement Section

(Use Traffic as a prefix)

Traffic 1 -- O.I.C. and Traffic 2 through Traffic 12

Special Units

S.U.-1	Equipment Van
S.U.-2	" " "
S.U.-3	" " "
S.U.-4	Bus
S.U.-5	Bus
S.U.-6	Bus
S.U.-7	Gas Tanker
S.U.-8	Field Hdqtrs (Towing Vehicles)
S.U.-9	Communications Van
S.U.-10	Light Truck
S.U.-11	Six Wheel Drive Truck

BUREAU OF CRIMINAL INVESTIGATIONS

The Major is in Car 6

MAJOR CRIMES DIVISION

Commander -- 19

Robbery Section

Sergeants are R-10, R-20 and R-30, The numbers R-1 through R-30 constitute the Robbery Section. Some numbers are not in use. R-1 is Lt.

Homicide-Sex Section

M-10, M-20 and M-30 are the Sergeants with the numbers M-1 through M-30 making up the rest of the section. Some numbers are open. M-1 is Lt.

Crimes against Property Section

Lieutenant is P-1. In the Hyattsville Unit the Sergeants are P-10 and P-20. The rest of the Unit use numbers P-2 through P-29 with some numbers open. The Oxon Hill Unit designates Sergeants as P-30 and P-40 P-31 through P-59 are used for the rest of the unit with some open nos.

Check and Fraud Section

The Sergeant is P-60. P-61, P-62, P-63 and P-64 make up the Section.

Evidence Collection Section

The Sergeant is 0-1. 0-2 through 0-9 make up the Section.

SPECIAL ENFORCEMENT DIVISION

The captain and Commander is identified by the number 18

Juvenile Section Forestville

The Sergeant is Y-10. Y-1 through Y-29 comprise the Section with some open numbers

Juvenile Section Hyattsville

The Sergeant is Y-30. Y-31 through Y-49 make up the Section.

Juvenile Section Oxon Hill

The Sergeant is Y-50. Identifiers Y-51 through Y-69 comprise the Unit.

Missing Persons Unit

Y-80 is Open. Y81 through Y-85 comprise the unit.

Vice Control Section

V-1 is the Lieutenant.

Narcotics Unit

V-2, V-3, and V-4 make up the Unit.

RADIO FREQUENCIES FOR PRINCE GEORGE'S COUNTY POLICE

Channel 1	494.687	Dispatch, Hyattsville, Sectors A,B,and C
Channel 2	494.562	Dispatch, Clinton
Channel 3	494.937	Car to Car & Emergency
Channel 4	495.137	Dispatch, Seat Pleasant, Sector G and H
Channel 5	494.537	Dispatch Bowie/Marlboro, Sectors D & E
Channel 6	495.087	Dispatch, Oxon Hill, Sectors J and K
Channel 7	494.737	When there are enough dispatchers, Sector C will go to Channel 7.

SOD Detectives can operate on any of the above but mainly use their own frequency -- 155.790.

RADIO NUMBERS FOR MUNICIPAL POLICE

Colmar Manor	201 - 205	on County Frequency Channel 1
Bladensburg	210 - 215	" " " " " "" " & 453.900
Cheverly	220 - 225	on County Freq. Ch. 1 only
University Park	226 -229	" " " " "
Landover Hills	230 - 235	" " " " "
Edmonston	240 - 245	" " " " "
Mt. Ranier	250 - 259	Channel 1, but mainly 495.162
Hyattsville City	270 - 279	155.130
Riverdale	280 - 284	Channel 1, but mainly 155.565
District HEights	301 - 309	County Channel 4
Morningside	320 -325	" " " " "
Seat Pleasant	330 - 335	" " " " "
Forest Heights	340 - 345	" " " " "
Fairmont Heights	350 - 355	" " " " "

Prince George's County Police — Effective Oct, 1972

RADIO SIGNALS

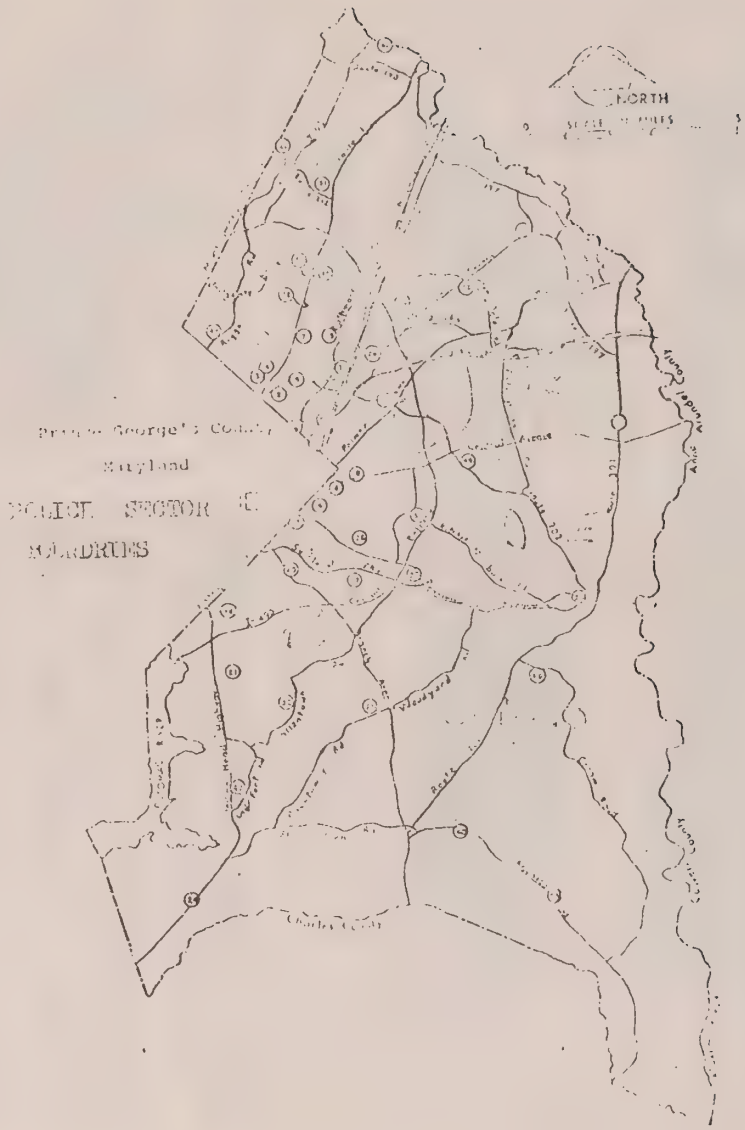
Sig. 1 Contact your station, public service
Sig. 2 Contact your station, public service, immediately
Sig. 3 Report to your station
Sig. 3I Report to your station, immediately
Sig. 4 Meet complainant and get full report
Sig. 5 Investigate vehicle at
Sig. 6 Investigate occupants of vehicle at _____
Sig. 6I Investigate operator drunk driving _____
Sig. 7 Investigate suspicious person(s)
Sig. 7A Investigate suspicious person, use caution (armed)
Sig. 8 Registration inform. (name, address, of owner)
Sig. 9 Accident
Sig. 9I Accident w/injury
Sig. 9F Accident w/death
Sig. 11 Hit and Run Accident
Sig. 11I Hit and run w/injury
Sig. 11F Hit and run accident w/death
Sig. 12 Jail break at _____
Sig. 13 Officer in trouble, "respond immediately to _____
Sig. 13I _____ station has serious trouble, all cars from _____ respond
Sig. 14 Felony, investigate
Sig. 14F Felony, warrant on file
Sig. 14X Felony, warrant on file, will extradite
Sig. 15 Unlawful assembly
Sig. 15F Fight
Sig. 15R Riot
Sig. 20 Ambulance call-routine
Sig. 20E Ambulance call-escort from _____ to _____
Sig. 20I Ambulance call-emergency
Sig. 22 Investigate trouble in building, use caution, unknown trouble
Sig. 25 Animal complaint
Sig. 25B Animal bite report
Sig. 25I Animal injured at _____
Sig. 25F Animal dead at _____
Sig. 44 Bomb Scare
Sig. 45 Cave-In
Sig. 46 Motorcycles
Sig. 50 Cross Burning
Sig. 60 Assault report
Sig. 61 Burglary report
Sig. 62 Housebreaking or B/E report
Sig. 63 Larceny report
Sig. 64 Murder
Sig. 65 Sex
Sig. 66 Suicide or attempt
Sig. 67 Drowning
Sig. 68 Disorderly subject
Sig. 70 Drunk
Sig. 71 Family trouble
Sig. 72 Juvenile complaint
Sig. 73 Disorderly juveniles
Sig. 74 Unlawful assembly of juveniles
Sig. 75 Request camera
Sig. 76 Assist Fire apparatus
Sig. 76C Crowd Control
Sig. 76T Traffic
Sig. 78 Burglar alarm at _____
Sig. 79 Open building
Sig. 81 Death report
Sig. 82 Meet officer at _____
Sig. 83 Notification at _____
Sig. 84 Hold-up (state whether in progress)
Sig. 86 Breaking in-in progress
Sig. 87 Church or school crossing at _____
Sig. 88 Stop for mail at _____
Sig. 89 Pick up recovered property at _____
Sig. 91 Gas
Sig. 98 Eating out of area
Sig. 99 Out of service for meal
Sig. 100 Car control transmitter
Sig. 500 Lookout to follow

Prince George's County Police

RADIO SIGNALS

Effective Oct, 1972

10-1	Receiving poorly
10-2	Receiving well
10-3	Stop transmitting (except in emergencies)
10-4	Acknowledgment
10-5	Relay to
10-6	Busy
10-7	Out of service
10-8	In service
10-9	Repeat, unable to copy
10-10	Out of service, subject to call
10-11	Transmitting too rapidly
10-13	Advise weather conditions
10-14	Convoy or Escort
10-14A	Convoy or Escort-Army
10-14B	Convoy or Escort-Cash or money
10-14E	Convoy or Escort-Explosives
10-14F	Convoy or Escort-Funeral
10-14L	Convoy or Escort-Alcoholic Bev.
10-14M	Convoy or Escort-Marines
10-14N	Convoy or Escort-Navy
10-14W	Convoy or Escort-Wide or large number of vehicle
10-15	Have prisoner enroute to
10-20	What is your present location?
10-21	Do you have any calls for me?
10-22	Cancel or disregard last message
10-25	Do you have contact with
10-27	Any reply to our message?
10-28	Check full registration information on vehicle, check for stolen
10-29	Check for wanted
10-30	Does not conform to regulations
10-32	Last assignment complete, 10-8
10-33	Important business for you at your station
10-34	Clear for local dispatch
10-35	Confidential information (call public service)
10-36	Correct time
10-37	Dispatcher on duty
10-40	Advise public service
10-41	No calls for you at this time
10-42	Check for operators or chauffeur's license on (name, address, color, sex and date of birth)
10-62	Unable to copy (use public service)
10-64	Network free for transmission
10-70	Network message statewide
10-85	_____ left this station at _____
10-86	Call your home
10-89	_____ is calling your station
10-94	Test, no talking, transmitter only
10-97	How is reception?



contact/info wanted

This column has two purposes: to help members contact each other, and to help members obtain information directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members by telephone, letter, or cassette tape in a certain geographic area or with members who have similar listening interests, this is the perfect place for you to make known your interests. Remember – those who respond will do so directly, so be sure to provide your phone number, the best time to be called, or your address. Write to:

RCMA member John Darr, long-time and knowledgeable editor of this column, is resigning his post as of this issue. The editor, the newsletter staff, and all the RCMA members to whom John has provided "Contact/Information Wanted," take this opportunity to extend their sincere appreciation for his commitment to, and his services for, RCMA.

Carol Ruth
Managing Editor

GULF COAST CONTACT: New member in Bayou La Batre, Alabama, would like to contact members in the Mobile, Alabama, and Pascagoula, Mississippi, areas. (6-6-82)
REED DARSEY (AL-Ø22), P O Box 2123, Mobile, AL 36652

PHOENIX CONTACT: Looking for Phoenix member who found the Van Buren Street bugs several years ago. Would like update and additional information on induction taping techniques. (6-9-82)
RICKEY STEIN (NJ-ØØ1), 456 Barrymore Place, North Brunswick, NJ 08902

NEED HELP! Can anyone ID frequency 44.70? Heard on skip from Florida. Call signs heard were KJA 260, KAA (?) 951 and KQY ??? Also heard Logan County. This freq is not in Florida. Also need some ID-ing on 45.150 or 45.520. (6-14-82)
JOE M LEWIS (MD-Ø15), 977 Irene Ave, Largo, FL 33541

ARIZONA FREQs WANTED: Canadian member planning a trip to the Scottsdale-Phoenix area in September would appreciate any information regarding law enforcement and fire frequencies. (6-15-82)
HARRY SHUTE (CANA-Ø74), 9555 92 St, Edmonton, Alberta, Canada T6C 3S2

"SCANNING PITTSBURGH?" Can anyone tell this member what has happened to the publication, "Scanning Pittsburgh?" Is it still in print? If so, where can he write to receive information? (6-17-82)
MICHAEL GABER (PA-153), Logan Road, Gibsonia, PA 15044

GARDENA CALIF COMMUNICATIONS: Member desires contact with another member who lives in or near Gardena, CA, to tape record local handheld communications on Saturday nights. (6-18-82)
DAVE ANDERSON (CA-OR-122) WB6CFY, 5 Hummingbird, Irvine, CA 92714 //
(714) 551-5007 eves.

CENTRAL CALIF FREQ SWAP? Looking for freqs for police, fire, medical, business or anything in San Joaquin, Toulumne, and Merced Counties. Will trade for Stanislaus County. (6-19-82)
JASPER HAMILTON (CA-ST-ØØ3), 703 Tully Rd, Modesto, CA 95350 //
(209) 526-5223 after 1900 hrs.

PENNSYLVANIA FREQs WANTED: Here's a member who would like to trade his Pennsylvania federal, state, county, and local frequencies for yours. (6-28-82)
DAVID BEACH (PA-172), RD #1 Box 355B, Wapwallopen, PA 18660

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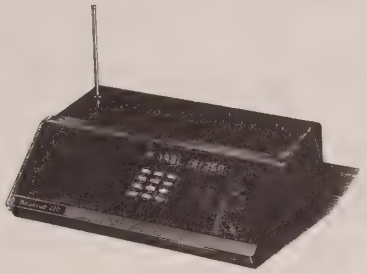

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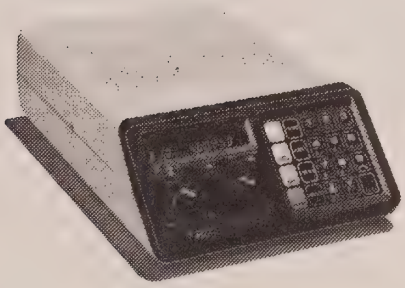

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FCC TOPICS

George DuBois, Editor

FCC news and information of interest relating to two-way communications. Send comments and questions to:
George DuBois, 10048 NE Campaign, Portland, OR 97220

At the request of the National Telecommunications and Information Agency (NTIA) the FCC is proposing sharing of the 899 to 902 and 938 to 941 mHz bands between Government and non-government Fixed services. This is to satisfy the Governments need for low-capacity fixed radio links. NTIA indicates that it has become almost impossible in some areas to find available frequencies for new land-mobile requirements in the existing 162-174 and 406-420 mHz bands. Four bands were considered for possible shared use: 806-902, 947-952 and 952-960 mHz. (The 902-928 mHz band is presently shared with the Government but is already full of garbage, automatic vehicle monitoring, diathermy and other ISM equipment, etc.) 806-902, of course, is already either allocated or reserved for non-government land-mobile use. The 947-952 mHz band is divided into ten 500 kHz channels for aural broadcast studio-to-transmitter links. If they were to stick the Government assignments in between the broadcast links there still wouldn't be enough contiguous spectrum to meet their demands. The 952-960 mHz band is heavily assigned in the Private Operational-Fixed microwave Service. The Commission concluded that there is no spectrum available that could reasonably be shared with Government Fixed service, but is nevertheless inviting comment on these or any other alternatives. NTIA has in turn specifically asked for access to the 899-902 and 938-941 mHz bands, both presently held in reserve for private land-mobile service expansion. (NTIA had first asked for most of the 932-941 mHz reserve band, until they found out that Canada is proposing a new General Radio Service (CB) in the 933-935.5 mHz band.) NTIA has also asked for access to spectrum at 900 mHz for land-mobile use, but the FCC is confident that with the reallocation of fixed stations from the present VHF-UHF Government bands, adequate space can be found from the vacated channels. Some of the Fixed services specifically mentioned by NTIA for possible reallocation to 900 mHz are control links used by the Army Corps of Engineers, US Coast Guard and others, telemetry and data links used by TVA, BPA, etc., and interconnection links used in law enforcement mobile radio systems. (!)

The Commission has released a First Report and Order allocating 40 channels for paging by Common Carriers at 900 mHz. The frequencies, 931.0125 through 931.9875, will be available to wireline common carriers (telephone oompanies) and radio common carriers. Any type of emmission may be used, but with a 25 kHz bandwidth limit. Maximum power is 1000 watts. There will be no time limit on message length nor will any channels be set aside for specific paging methods, as had been originally proposed. Three channels are reserved for inter-city or wide-area paging use. 931.9125 and 931.9375 will be for nationwide or regionwide service and the frequency 931.8875 will be for nationwide service only. The Commission will assign all frequencies solely using mileage separation criteria, namely 70 miles between stations. The service area of a station will be considered to be a 20 mile radius. The intercity channels are to be shared among licensees. Applicants have one year to reach agreement on utilization of their frequency or their application will be dismissed. No local paging will

be allowed on the intercity channels. The band from 930 to 931 mHz is to be held in reserve for use with advanced paging techniques, other than simple tone or tone/voice. No decision has been reached regarding allocation of the 929-930 mHz paging band to the Private services (Public Safety, Industrial). A Further Notice of Inquiry was recently released (page 49, July column) and comment is still sought on the method of assignment and the loading standards for the Private channels.

The FCC has eliminated the requirement that applicants submit a showing of public need when requesting their first channel in the Domestic Public Land Mobile Radio Service (mobile telephone). Applicants had been required to submit population or demographic information to justify the need for service in an area. The data will still be required when applying for additional frequencies. The requirement was kind of vague, I suppose since if one guy wanted a mobile phone, this could justify as a public need. Also existing, competing companies frequently used the public need as the basis of a petition to deny grant of new applications. A companion Order also eliminates this requirement for new one-way (paging) stations.

Parts 81 and 83 were amended to make Marine channel 11 (156.55 mHz) available exclusively for Vessel Traffic Service (VTS) in the Houston, Tx. area. This is in addition to channel 12 (156.6 mHz), which has become heavily loaded. Existing licensees on channel 11 have until the expiration of their licenses to change frequency. VTS is a vessel movement reporting system operated by the Coast Guard.

In the "who cares" department this month is the rule change that eliminates the requirement that a current copy of Part 95 be kept by licensees in the Personal Radio Services. Besides the 27 mHz Citizens Band, this includes the 462 mHz General Mobile Radio Service.

The two UHF frequency pairs reserved for itinerant operation in the Business Radio Service have been redesignated for general use in the Detroit, Mich. area. The Channels, 464.5 and 464.55 mHz, will be available for either itinerant or permanent use in a small attempt to relieve congestion in Detroit, which has neither T-band or 851 mHz frequencies available on a primary basis because of its proximity to Canada. The original proposal also asked for reallocation of five vacant UHF frequency pairs available to other services, but it is now determined that none of these frequencies are presently unused.

The Commission has instituted temporary licensing of new users of existing Specialized Mobile Radio System (SMRS) facilities in the 851 mHz band. This is identical to the temporary licensing now permitted in the Business Radio Service in other bands. The applicant completes a form certifying his eligibility in the particular radio service and uses the call letters "WT-" followed by his local phone number, while the Commission processes his application. The original proposal in this Docket had considered instituting "fleet licensing", where SMRS owners would be responsible for licensing and rule compliance by all users of his facility. While the Commission had no doubts about the legality of allowing this, they agreed that many facility owners might not wish to take on this responsibility. Temporary licensing allows new users immediate use of existing repeaters with no burden on the SMRS owner or the Commission. Temporary licensing will not be allowed within 85 miles of the Mexican border and a decision soon will be released regarding use near the Canadian border.

A Report and Order has been issued in the dispute going back over ten years about whether third-party radio equipment suppliers act as common carriers in the way they market communications gear. The courts have ruled in the past that a radio common carrier offers "a communications service for hire to the

public at large". The FCC has held that third-party equipment suppliers do not offer service to "the public at large" since offerings are available only to parties eligible for licensing by the Commission and equipment is usually only provided on a long-term, contractual basis and, as such, could not be considered an indifferent offering to the public at large. Further, radio equipment suppliers offer equipment rental, sites, maintenance, etc., to authorized licensees of the spectrum for the licensees own use, and do not provide any actual communications or dispatch service for the licensee, and, in fact, are not even allowed to use radio spectrum themselves. Interconnection of the radio facility to the telephone network (autopatch) does not alter this. Similarly, a cooperative agreement among licensees for sharing radio system costs cannot be considered common carriage since FCC rules prohibit any party from profiting from the arrangement. The FCC is retaining the rule against "packaged service", the purchase of both equipment and dispatching service from the same party. They also reaffirmed their decision not to require submission of the details of cost-sharing agreements for the Commissions approval, but merely the retention of them in the licensees records. No annual reports will be required either. Non-profit coops or associations of users will have to comply with the cooperative use rules, but not parent and subsidiary corporations or systems used by companies involved in a joint venture. All licensees must be permitted access to the actual transmitter site.

A few months ago the FCC released the Order creating the new Low Power TV Service. This allows the creation of "mini" TV stations on vacant TV channels using a maximum visual power of 10 watts on VHF and 1 kw on UHF. Stations may originate their own programming, rebroadcast other stations or networks, or broadcast Pay TV, if they want. All operations are on a secondary basis to existing TV stations and translaters and must not cause interference to them. The same applies to the land mobile and fixed services. Low Power TV stations must not cause interference to these services and must accept any interference caused by them. The Commission is permitting applicants to apply for any channel available but cautions them to avoid channels 4 and 5 (adjacent to the 72-76 mHz Fixed band), 7 and 13 (adjacent to 174 mHz and 220 mHz, respectively), 14 through 20 (T-band) and adjacent channel 21, and channel 69, next to the 806 mHz band. The FCC will particularly examine all applications for channels 14 through 20 (470-512 mHz) to determine the impact on land mobile use, especially in the largest urban areas. Due to what they call "strong public support and demand" for Low Power TV, they are not limiting use of these channels, in spite of petitions now being considered to expand the use of T-band channels for land mobile use. Licensees in the Low Power TV service will be permitted use of the Auxiliary Broadcast services, including microwave studio-to-transmitter links and pickups and the VHF and UHF Remote Broadcast Pickup frequencies.

Among proposals this month is one that would eliminate the Antenna Height vs. Effective Radiated Power Table which applies to T-band repeaters in the Los Angeles area. The Table indicates the maximum ERP permitted, decreasing as antenna height is increased above 1500 feet. It's purpose was to permit channel reuse, since certain mountaintop sites in the LA area would otherwise blanket the whole region when running at the maximum power otherwise permitted. The National Mobile Radio Association, who had petitioned the Commission on this matter before, submitted an engineering study which shows that with reduced power, many mobile units would not be able to hear other repeaters on the channel and would probably create more interference by transmitting over them. Also, many dead spots would result, most critical to the Public Safety services. And, the Commission now

has doubts about whether the channels could be used at other sites in the area anyway.

A Notice of Inquiry was released seeking comment on whether to simplify the frequency coordination requirements in the Business Radio Service. Presently, applicants for channels below 470 mHz must either submit a statement from a frequency coordination committee or else an engineering study indicating the degree of probable interference to existing stations within 75 miles and a statement that all such stations have been notified of the application. The amendment proposed would eliminate the notification procedure for changes or additions to existing UHF systems, requiring only the engineering study.

And finally, in response to a petition from the Academy of Model Aeronautics, Inc., the FCC is proposing the use for radio-controlled models of "offset" frequencies in the 72-76 mHz band, namely 72.01 through 72.99 and 75.41 through 75.99 in 20 kHz steps. These are offset by 10 kHz from the channels available for Fixed service, 72.02, 72.04, etc. (See March, 81 column.) Many of these offsets couldn't be used, since a number of Fixed stations will undoubtedly be operating in a given area. But it is felt that with a total of 73 new frequencies there should be a sufficient number of available channels at most locations. The Academy has also asked that the use of FM emission be allowed, as well as AM.

FEDERAL GOV'T and ☆ MILITARY ☆

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to:
Dennis Biagioli, 607 W. Pleasant Ave., Villa Park, IL 60181

Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

Hi! Welcome to another edition of your Federal Government / Military Column. It is yours, you know. And we would like more of your input. Many of you hesitate to send along material because of, perhaps, a feeling that nobody would be interested in your contribution from what may be, to you, an "out of the way" place. Bah, humbug!

Let's try to get things organized. Much of the country has Army Corps of Engineers within listening range. With the help of John (IL-010), who sends along this list of frequencies most commonly used by the Engineers, let us make the first attempt to coordinate a nationwide list, okay? Look around - listen - make notes - and send in what you find. Even if it might be only one frequency. Here's the list:

Army Corps of Engineers

38.69	163.4375	406.9375
38.89	163.5875	407.2375
38.91	164.1750	407.5625
139.1500	164.2000	412.8375
149.6250	165.0625	413.2375
150.6750	165.1125	413.4750
162.8125	169.4500	413.5625
163.0250	169.5000	416.5375
163.4125	170.2250	417.8500
	171.9250	

So, how about sending what you confirm -- frequency, location, usage, designation (channel number or name), anything else of interest -- and send it to me no later than October 1st. I will then tabulate a list and it will be printed here, probably in your mailing received in November or December. We will be doing this type project with other agencies, too. So, get involved with your NEWSLETTER.

DAVID RODRIGUES (CA-SF-025) sends along the following:

148.300	Navy, Treasure Island, Fire Dept.
148.600	Army, Presidio, Military Polie (AAG 203)
163.150	Interior, U.S. Park Police, Recreation Area (Ft. Mason KMC 790)
164.9625	Veterans Admin. Hospital, San Francisco, Pager (KFO 236)
170.0500	Interior, U.S. Park Rangers at Point Reyes (KMC 798)
170.1250	Post Office, San Francisco (KAK 313)
173.4600	Army, Presidio, Pager
417.2000	GSA, Federal Protection Service (KPA 910)

If you live in a large metropolitan area (like Chicago) and are plagued with image interference or intermodulation (intermod), perhaps help is at hand. I bought an FTR-3 Scanner Filter III from Grove Enterprises, and lo and behold, it works just fine. I just received it a couple of days ago, but I can use my outside antenna and not have my most hated intermod show up in the middle of the VHF government band. Now, I'm not saying that it will filter out that amateur repeater image if they are right next door and using 75 watts at 250 feet. But, it filters out all but my strongest neighbors. And does a super job on intermod in the area we here affectionately refer to as "intermod alley." In a quick test this afternoon on a Cushman CE-6, using a Bearat 20/20 tuned for government band we measured a receiver sensitivity of .5uV at 167.335 MHz. Image sensitivity of 145.735 MHz received on a display frequency of 167.335 was .60uV without the filter in place. With the filter tuned to reject the 145.735 image, we measured a sensitivity of 40uV. That's pretty good, so my technician tells me. At least, it works on my radios. A guarantee? Talk to Bob Grove. But, with my radios tuned the way they have been, in my location, with my antenna set-up, I'm happy. It ain't perfect, as they say, but for the price-I'm pleased. No -- not a paid endorsement, just a humble opinion.

We shall close with the final installment of the government bands "channeling plan," the UHF frequencies. Not that this is <u>always</u> followed, but most are here. It

appears most variations are found in the VHF high band. But, they are "supposed" to be heading in these directions.

Don't forget the Corps of Engineers project. And, listen and stay well.

Denny

Channeling Plan for Assignments in the Band 406.1-420 MHz

This plan designates the frequencies in the band 406.1-420 MHz available for assignments a) with a bandwidth of emission that can be contained wholly within 25 kHz (narrowband channels), b) with a bandwidth of emission that can be contained wholly within 12.5 kHz (splinter channels), and c) those with other than F3 emission that cannot be contained wholly within 25 kHz (wideband channels).

406.125
.150
.175
.200
.225
.250
.275
.300
.325
.350
.375
.400
.425
.450
.475
.500
.525
.550
.575
.600
.625
.650
.675
.700
.725
.750
.775
.800
.825
.850
.875
.900
.925
.950
.975
407.000
.025
.050
.075
.100
.125
.150
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WIDEBAND 416.4375-416.7625 MHz

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences, and any other information relating to monitoring in countries other than the United States and Canada. Send to: Richard Stein, 456 Barrymore Place, North Brunswick, NJ 08902.

I generally try to limit the length of this column to two sides. I believe that the material that I have for you this month warrants the use of the additional space and I think you'll find it most interesting.

Truly one of the more rewarding aspects of being able to serve RCMA in the capacity of column editor has been the friendships made and the correspondence received. Each editor has received material from time to time from sources who have asked to remain annonymous, but whose identity is known to that editor. On rare occasions, a truly annonymous submission is received and this is the case with the following article.

Several months ago, I received an envelope with RCMA's return address on the back. There were European stamps on the front. How lucky, I thought, our managing editor has finally it to Europe and has some good frequency info for us. I was very surprised to find that the letter did not come from within our organization, but from a hobbyist living in Northern Europe.

He states-"I am an international citizen-nationality everywhere. My profession is such that I visit the USA a couple of times a year. I have an excellent opportunity to look at your Newsletter at a library while here in the US.

At home, the Sporadic 'E Layer' allows for DX-ing over 30Mhz. several times a year bringing in USSR FM (65-73MHz.) and Eastern Europe too. Tropo conditions in this frequency range can occur rather often during the entire year especially from the USSR and Sweden. TV from England at 41MHz. is heard often at home- more so than signals at 65-108MHz.

Concerning Russian radio transmissions- enclosed are two transceiver prospectus sheets. There is much radio traffic between 32-50MHz. in the USSR and with Sporadic 'E' activity, this skip is heard almost every day during the whole year during daylight hours. During the summer, it is also heard early mornings and late evenings. It makes for fantastic listening. Russian radio communication receivers and transmitters are rather poor and old fashioned. There are no UHF communications-well perhaps a little. UHF is used mainly for TV transmissions."

Well there is a part of a most fascinating letter. You now know that RCMA's Newsletter is read by a much wider group than it's 3000 members. The information that each of us contributes really goes a long, long way.

To the 'International Citizen'- I say thank you. I would be most anxious to hear from you again. Perhaps on a future trip to the USA, you can find the time to call me. My phone number is listed. Thank you for some very interesting bits of information.

The following article is presented, paragraph by paragraph, in first, English, then Russian.

ULTRASHORTWAVE RADIOSTATION 20 RTP-2-FM

The 20-RTP-2-FM, a portable ultrashortwave (sic)VHF radiotelephone station (sic)(transceiver) with FM coverage over the range of 33 to 46MHz. The transceiver is intended for 2-way radio communication on a single frequency (simplex mode) for use in industry, agriculture, construction,transportation, and in other similar areas, with the same type of mobile or base station. On special order, a dual frequency set is manufactured which can link a variable frequency receiver and a transmitter in duplex mode within an 11 MHz. spread. The transceiver provides for the sending of a request (paging) tone at one of the following frequencies: 1000, 1450, or 2100Hz. and this frequency has to be specified by the customer.

According to electrical requirements, the 20-RTP-2FM corresponds to (is certified as) a radio transmitting station, 2nd class, VHF, per GOST 12252-66 (GOST lists are lists of standards that deal with all manufactured products,) and also in accordance with conditions of use corresponding to the 9th group as per GOST16019-70.

УЛЬТРАКОРОТКОВОЛНОВАЯ РАДИОСТАНЦИЯ

20РТП-2-ЧМ

20РТП-2-ЧМ — портативная ультракоротковолновая (УКВ) радиотелефонная станция с частотной модуляцией в диапазоне 33—46 МГц. Радиостанция предназначена для двусторонней связи в радиосетях с одночастотным симплексом в промышленности, сельском хозяйстве, на стройках, транспорте и других областях народного хозяйства при связи с однотипными переносными, абонентскими и центральными радиостанциями. По специальному заказу изготавливаются радиостанции для работы двухчастотным симплексом со сдвигом частот приемника и передатчика 11 МГц. Радиостанция обеспечивает посылку тонального вызова на одной из частот 1000, 1450 или 2100 Гц, которая оговаривается Заказчиком.

По электрическим требованиям радиостанция 20 РТП-2-ЧМ относится к переносным радиотелефонным УКВ станциям второго класса ГОСТ 12252—66, а по условиям эксплуатации — к 9-й группе ГОСТ 16019—70.

PARTICULARS OF THE TRANSCEIVER

The transceiver 20 RTP-2FM is made completely based on transistors and solid state devices. The transceiver utilizes remote control, the receiver-transmitter is located in the carrying case which protects it from shocks and precipitation and also from solar radiation. The power supply for the transceiver can either be achieved from the battery or from house current (mains voltage) at 127/220 volts at 50 cycles. This can be done by means of an adaptor. The receiver has a special noise reduction (filtering) feature.

ОСОБЕННОСТИ РАДИОСТАНЦИИ

Радиостанция 20РТП-2-ЧМ выполнена полностью на полупроводниковых приборах.

В радиостанции применяется дистанционное управление с манипулятора, а приемопередатчик расположен в сумке, которая защищает его от ударов, прямого воздействия осадков и солнечной радиации. Питание радиостанции может осуществляться от аккумуляторной батареи или от промышленной сети переменного тока 127/220 В частотой 50 Гц через сетевой блок питания.

Приемник радиостанции имеет шумоподавитель.

ELECTRICAL SCHEMATIC
The transceiver has a completely independent receiver and transmitter. This permits the manufacture of the transceiver for use with a single or double frequency system (simplex or duplex).
The receiver is built with double conversion (?) of frequency. The first IF is 7612kHz, the second is 500kHz. The element of selectivity based on the 2nd IF is an electomechanical filter.
The heterodyne and exciter frequencies of the transmitter are stabilized by a quartz crystal. For standardization of supplied voltage to separate parts of the transceiver, electronic stabilization is used. The transceiver has 24 transistors and 12 diodes.

ЭЛЕКТРИЧЕСКАЯ СХЕМА

Радиостанция имеет независимые в схемном построении приемник и передатчик. Это позволяет изготовить радиостанции для работы одночастотным или двухчастотным симплексом. Приемник радиостанции построен с двойным преобразованием частоты. Первая промежуточная частота — 7612 кГц, вторая — 500 кГц. Элементом селекции по второй промежуточной частоте служит электромеханический фильтр.

Частоты гетеродинов и возбудителей передатчика стабилизированы кварцевыми резонаторами.

Для стабилизации питающих напряжений отдельных блоков в радиостанции применяется электронная стабилизация напряжений.

Радиостанция содержит 24 транзистора и 12 диодов.

CONSTRUCTION
The transceiver is made of functional blocks(parts) which are located in the metallic frame and covered with plastic housings. The power pack can be attached on the opposite side with special fixings. Located on the side wall of the housing are the power switch, noise suppression switch, special connector for the 'manipulator'(sic)(control head with microphone/speaker),antenna socket, and socket for measuring instrument with an output resistance of 75 Ohms.

Contents: switches for the transmit and volume are located on the 'manipulator' The built in speaker/microphone provides receiving and transmitting of the messages. The antenna consists of a flexible rod. The entire unit of the transciever consists of the transmitter/receiver with battery pack, antenna, 'manipulator', and carrying case, and some auxiliary replacement parts (fuses, etc.)

КОНСТРУКЦИЯ

Приемопередатчик компонуется из функциональных блоков, которые размещаются на металлическом каркасе, и закрывается корпусом из пластмассы. С противоположной стороны к нему с помощью замковых разъемов крепится батарея питания. На торцовой грани корпуса расположены: выключатель питания, выключатель шумоподавителя, разъем манипулятора, антенное и измерительное гнезда для подключения антенны и измерительных приборов с выходным сопротивлением 75 Ом.

Органы управления: переключатели „передача" и „тон" — находятся на манипуляторе. Встроенный в манипулятор обратимый микрофон-телефон обеспечивает прием и передачу сообщений.

Антенна радиостанции выполнена в виде гибкого штыря.

Комплект радиостанции состоит из блока приемопередатчика с батареей питания, антенны, манипулятора, сумки для переноски и комплекта ЗИП.

BASIC TECHNICAL DATA

frequency range, MHz 33-46
number of channels 1
space between channels 25 kHz
temperature range- trans/receiver -10 to +50 C
manipulator -25 to +50
distance(range) in kM-not less than 1
size, mm 36x75x190
weight (total) 950

transmitter:power- not less than 100 milliwatts
the side radiation-not more than 5 microvolts
deviation of frequency kHz ± 5
stability of frequency-not more than $\pm 50 \cdot 10^{-6}$
increase of FM characteristics in the bandwidth 300=3400 hertz
in the direction of high frequencies dB/octave 6±3
coefficient of non-linear distortion at freq. of 1000hZ/%
not more than 1

receiver:selectivity at the ratio of S/N 20dB microvolts-not less than 1
output power-megawatts, not less than 20
coefficient of nonlinear distortion %- not more than 10
two signal selectivity at co-channel in dB-not less than 70
dampening of false (spurious) channels- dB-not less than 70
heterodyne radiation, watts-not more than $2 \cdot 10^{-8}$

Power sources- nominal voltage, volts 7.5
capacity, amp/hrs 0.45
time of continuous operation at the ration of receive/transmit 3:1 hrs. 8

The major power source is a battery consisting of 6 battery cells connected in series- TS-N-K (probably referring to a Zinc-Nickel-Cadmium cell or perhaps the name of the plant abbreviated)- 0.45 Charging the 6 batteries of this type can be accomplished with a charger 66P1(version 1) which allows you to charge from 1 to 12 batteries at the same time. In order to be able to use the transceiver from wall (house) current 127/227 volts, 50 cycles, it is necessary to use a special adapter 65P1(version 1). The adapter power supply 65P1(version 1) and the charger 66P1(version 1) can be supplied on a separate order (as an option).

ОСНОВНЫЕ ДАННЫЕ

Диапазон частот, МГц	33—46
Количество каналов	1
Разнос между каналами, кГц . .	25
Интервал рабочих температур, °С:	
приемопередатчика	от —10 до +50
манипулятора	от —25 до +50
Дальность связи, км, не менее . .	1
Габариты, мм	36×75×190
Масса приемопередатчика с батареей питания, манипулятора и антенны, г, не более	950

Передатчик

Выходная мощность, мВт, не менее	100
Побочные излучения, мкВт, не более	5
Девиация частоты, кГц	±5
Нестабильность частоты, не более	$\pm 50 \cdot 10^{-6}$
Подъем частотно-модуляционной характеристики в полосе 300—3400 Гц в сторону высоких частот, дБ/октаву	6±3
Коэффициент нелинейных искажений на частоте 1000 Гц, %, не более	15

Приемник

Чувствительность при соотношении сигнал/шум 20 дБ, мкВ, не хуже	1,0
Выходная мощность, мВт, не менее	20
Коэффициент нелинейных искажений, %, не более	10
Двухсигнальная избирательность по соседнему каналу, дБ, не менее	70
Ослабление ложных каналов, дБ, не менее	70
Излучение гетеродинов, Вт, не более	$2 \cdot 10^{-9}$

Источники питания	Номинальное, напряжение, В . . .	7,5
	Емкость, А·ч	0,45
	Время непрерывной работы при соотношении прием/передача 3:1, ч	8

Основным источником питания служит батарея, состоящая из шести последовательно соединенных аккумуляторов ЦНК-0,45.

Зарядка шести батарей ЦНК-0,45 осуществляется от зарядного устройства 66Р1 вариант 1, позволяющего заряжать одновременно от 1 до 12 батарей.

Для работы радиостанции от промышленной сети переменного тока 127/220 В частотой 50 Гц необходимо использовать специальный сетевой блок питания 65Р1 вариант 1.

Сетевой блок питания 65Р1 вариант 1 и зарядное устройство 66Р1 вариант 1 поставляются по отдельному заказу.

This is the first of two articles dealing with the Russian equipment. The Russian edition is presented exactly as it was sent to me. As you can see, there are no dates or any other bits of information on the copy. In discussing the picture of the woman with regard to hair and clothing style, it was felt by my Russian friends that both styles had to be 7 to 10 years old. In examining the electronics, and allowing for a lag in development of this 'non-essential' type of equipment a similar time period could be postulated. It is possible that the last digits on the GOST number refer to the year of promulgation of the standard. Thus GOST 16019-70 could be standard 16019 in the year 1970. This would also give an indication as to the age of the article and receiver.

Much thanx go to Yelena and Vadim for their assistance in the initial translation and to Polly Prelinger and Rick Prelinger for a second re-reading of the Russian and English and for their corrections and suggestions. I will present the second of these articles as soon as we finish the translation-perhaps within the next few months. In the mean time, please keep your information coming.

By the time you read this, Bob Ahern will be set up in his new location at 32 Mountain Home Road, Londonderry NH 03053, phone 603-432-4158. Bob is RMA Electronics (you must have seen his ads in the Newsletters) and he had opened a shop to the public for repairs and modifications of scanners, et. al. On some sets such as the Bearcat 250, he can made the repairs while you wait. You can still do business with him by mail or UPS. Bob repairs, modifies, sells on consignment, can provide good reconditioned sets as well as Canadian and European versions of a number of scanners. Check out his ad in this Newsletter. You might want to give him a call.

Until next month, שלום ושנה טובה

Marketplace

Gary M. Darcy, Editor

Members may advertise, free of charge, items wanted, items for sale, and items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to:
RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550.

Please be sure to include your membership number.

All Marketplace ads will be accepted ONLY on special forms available from this column's editor. Send a self-addressed STAMPED envelope (business size) to the address above to receive a supply of forms. Foreign members do not need to include postage on envelopes they send.

ATTENTION ALL RCMA MEMBERS WHO HAVE SUBMITTED MARKETPLACE AD REQUEST FORMS WITHIN THE PAST THREE TO FOUR MONTHS: Because of a personal problem that had developed in my life, I had asked a girlfriend of mine to type up this month's column. Well, it seems that all the forms she had in her possesion went up in smoke. She resides in a condominium, and on the night of Friday June 25th her next door neighbor's unit caught fire. The damage was total to her neighbor's unit, and confined to her kitchen and work-study room. The Marketplace material to be typed was in her work-study room. So what is being requested of you is this. Please submit new ad request forms. Send them to me at the Palmdale address. I am resuming full control of the column. I apologize for the inconvenience that this has probably caused for many of you. If you need more forms, let me know and I will get them out to you. If you wish you may photocopy the form that was included in the June 1982 Newsletter. Once again, I really do apologize for this inconvenience, it was totally beyond my control. Thanks. GARY M. DARCY, MARKETPLACE COLUMN EDITOR.

(THE CENTERFOLD OF THIS ISSUE IS A MARKETPLACE AD REQUEST FORM - Ed.)

MONITORING & THE LAW

Eric P. Gaskell, Editor

Send all articles, references, copies of monitoring laws and questions pertaining to the legal aspects of monitor radio listening to:
Eric P. Gaskell, 1925 16th Ave., Apt. 210, Vero Beach, FL 32960.

Welcome once again to Monitoring and the Law. I have just returned from the Veterans Administration Blind Rehabilitation Center in West Haven, Ct. I was there for approximately three months for additional training in regards to my vision impairment.

This month I would like to pass along information sent in from New Jersey RCMA members.

Rickey Stein NJ0001: Information supplied from his local news paper dated April 11, 1982.

State Senator H. James Saxton (R 8th District), has introduced Senate Bill S-1135 which has been referred to the Senate

Transportation and Communications Committee. This bill, if passed by the Senate and Assembly , would make it legal for amateur radio operators to have in their vehicles receivers that could pick-up radio frequencies issued to public safety agencies. As it now stands under the present law NJS 2A 127-4 it forbids any one to possess a radio receiver in his or her vehicle without a permit issued by the local Chief of Police. At this time is is impossible to obtain such a permit .

It is suggested that all amateur radio operators keep tabs on the bill introduced by Senator H. James Saxton. It is also requested that they contact their State Senators by mail and request that this bill be passed.

Howard Katseff NJ 149, sends in information on the New Jersey Law NJS 2A 127-4.

Any one who installs in a motor vehicle any type of scanner, short wave receiver that receives or operates on Federal Communication Commission frequencies that are issued to police, fire, local goverment or any other public safety agencie , is guilty of a misdemeanor. Unless a permit has been obtained from the Chief of Police in the county that he or she resides.

Well that's all for this month

LOW BAND SKIP

Send reports of distant stations received on the 30-50 MHz Band, as well as: information; comments; suggestions; question; and any items of interest regarding Low Band Dxing to:

Mike Britt, 14631 Yorba Street, Tustin, CA 92680.

Apologies are in order . . . to any readers of last month's column who were suprised, along with the column editor, to see the masthead's map turned on its side. - Editor

¡Halo! If the "pronóstico de propagacion" holds true, the M.U.F. should be high enough this winter to give you DXers some good skip on the frequencies above 30 MHz. The winter peak should come sometime in November or December, quite possibly producing strong activity up to about 50MHz for a short period. We can at least hope so.

With the above in mind, it is my pleasure to bring news which will probably be welcomed by many fans of skip..(read on)...

THE RETURN OF RECEPTION REPORTS!!

Low Band Skip reception reports have not been published in the RCMA newsletter since the November issue of 1981. When I took over the duties of editor of this column, I stated that I would no longer be using this form of skip reporting, in favor instead of having each member share about their most noteworthy skip receptions in a more personal way. Well, to be honest with you, I've been having second thoughts about that idea since day one of my editorship. Therefore, I take this opportunity to announce that I will resume publishing skip reception report forms in the Low Band Skip column.

I am adding the reception reports again, because without them, the column lacks the chance for all members to get a true look at what others are hearing in the way of propagation on a day-to-day basis. Additionally, the reports are called for because the lack of response to my "noteworthy" idea was resulting in in a lack of member input in the column. (you could say the response was "less than noteworthy"). As a high degreee of member input to the newsletter is something I support, I believe the content of the Low Band Skip column should be adjusted so as to increase input, rather than deminish it. As my initial idea seems to have resulted in an apathetic response, I feel adjusting the content of the column is the most positive step toward generating a higher level of interest.

I am not going to print up report forms and send them out at request. Instead, I am asking that you follow my suggested format in making your own reports. These reports may be typed or printed, however, a typed report is preferred, as it will save me the trouble of having to type the info. If you do wish to print, please do so legibley. If I can't read it, it will never make it into the newsletter.

Try to give a good cross reference of the stations you received on a particular date. Please try to do your own editing to eliminate unnecessary repitition. For your own personal logs, repitition is fine, if you desire to keep accurate records. For the newsletter, however, a station heard giving the same ID several times on the same date need only be listed once.

There are some instances where repitition is desirable. One of these is the logging of traffic received from any station which you are unable to identify. In such a case, try to give as much information as possible so that members at large can have all the clues that might help to identify the unknown station.

A change that I am making is to allow you to include more information than just the call sign and station ID in the logging of a skip reception. If you would like, you may list the entire sentence or phrase which contained the info. used in identifing the station received. For example, instead of listing KIU867 and simply "Harrisonburg, Virginia", list the entire statement heard: "16:00 hours, Harrisonburg-Rockingham County Fire/Rescue Communications Center; KIU867, Harrisonburg, Virginia." Not only will this add charactor to the reception reports, it will give more authenticity to them as well. Fire and police dispatches can also be quoted in this manner. Direct quotes should not exceed more than two or three lines, and lengthy transmissions will need to be summarized because listing too much detail will take up a lot of space.

THE EDITOR'S SUGGESTED GUIDELINES FOR SKIP REPORTS:

Skip reception reports may be typed or printed. At the top of each page, list your NAME, RCMA membership NUMBER, and the location where the skips were received. Also indicate the type of receiver(if more than one receiver used, indicate separately under each entry), and any special conditions which may have played a part in your reception of the skip activity(eg: severe storm activity, flock of birds on antenna, meteor landed in neighbor's yard).

TYPED REPORTS - must be on the appropriate 8½"X11" paper, and the column width MUST NOT exceed seven inches (anything beyond that will not appear when reproduced for the newsletter). Single space each entry, and double space between entries.

PRINTED REPORTS - should be on 8½"X11" paper. Lined (college rule)paper is recommended. Skip a space between entries.

CONTENT - Each entry should contain the following items.(See the example below).

1. Frequency. 1.A. Indicate if base or mobile: B/M; B; M; R in (repeater input); Rout. or both
2. Type of service heard (if known). Indicate if service is different than the FCC allocation for that frequency. If a foreign skip, indicate the language (if known).
3. The call sign. If actually heard, indicate with quotes. "KGC676" If known, but not heard, indicate in parentheses. (KGC676)
4. Location of origin of transmission (if known).
4A. Distance of location of origin from location of reception(OPTIONAL). State in miles or kilometers.
5. TIME at which transmission was received. List in 24:00 hours. Indicate time zone. Differentiate between Standard and Daylight time (U.S.). eg: E.D.T.= Eastern Daylight Time; E.S.T.= Eastern Standard Time.
6. DATE of reception. Indicate numerically. (10/12/82).
7. Transmission, or identifing portion of transmission. Lengthy traffic should be summarized; info. used to ID the skip should be quoted.
8. Any comments or special notations you may wish to make.

EXAMPLE OF RECEPTION REPORT ENTRIES:

33.90 R out — Fire "KQI316" Cincinatti, Ohio approx. 2,000 mi. 10:03PDT 9/16/81
"Attention: 2-William-91; respond to Adhere Products, 871 Redna Terrace; a subject with his arm caught in machinery. KQI316, 13:03."
Notes: Hamilton County F.D.; repeater, 33.9 is output.

33.475 ?? — Freq. not allocated by FCC (call-?) unknown origin 10:05PDT* 9/16/81
Continuous signal, open carrier type. Overrides skip signals on 33.48 but is actually received best on 33.475. May be AM signal? No voice traffic heard. Not a birdie - wasn't received when skip was out.
*note: signal was continuous for over an hour, broke only when signal faded in and out. Probably a foreign skip -?

46.18 B/M — Fire "KBI858" Cecil Co., Md. 2,500 mi. 08:00 PST 11/01/81
"KBI 858"

In summary, I have accomplished my original goal, which was to simply eliminate reception report forms; I never really wanted to do away with the reporting of receptions. Instead of filling in a form, you will now just type or print your info. on a blank piece of paper. You don't have to mail away for anything, you don't have to print up copies, and best of all, blank paper is infinitely available.

If you have any of the "old style" reception report forms which have been filled out, but were never sent in, I invite you to go ahead and send them to me as they are. There is no need to recopy what you have already completed.

A Word About Hi-Band skip

You may have been asking yourself, "can I send reports of skip received on frequencies above 50 MHz to the 'Low Band Skip' column?". If you haven't been asking that question, then you should ask it now.

I'm glad you asked! Yes, despite the title of this column, I will happily except reports of propagation signals which you have received on the other public service frequencies above 50 MHz. Perhaps this column would be better titled "Propagation Above 30 MHz", since there is no other column which deals specifically with propagation on the higher frequencies. I continue to use the title "Low Band Skip", because the main emphasis of the column continues to be the VHF-Lo Band.

On the subject of HI-Band propagation, Carl (NY-117), sent in some loggings of a few rather interesting skips which he has received over the last year. Carl was responsible for some excellent contributions to the L.B.S. column just before it disappeared from the newsletter last year. Among what he sent to me were the following skips on the VHF-Hi band (shown here using my new format):

From Carl (NY-117) Received on a Regency Touch M-400 Scanner in Larchmont, N.Y.

155.25 PD (KCA 937) Darmouth, Mass. 165 mi. 20:06 EST 11/5/81
B/M Base: "Control"
Mobile: "Control,'5'" Note: M call:(KW9061)

154.875 PD "KCB260" South Kingston, R.I. 140 mi. 20:59EST 11/5/81
B/M "Station K" and "KCB260"

155.52 "KCA367" Barnstable Co., Mass 180 mi. 21:30EST 11/5/81
"KCA 367" Note: Barnstable Co. S.O., Bourne, Mass.

Now, wasn't that easy to read...your eyes go right to the frequency.

Also from Carl (NY-117) came the following:

33.90 not FCC allc. No call unknown origin(England-?)* 16:20EST 10/16/81
B/M HELP!! British accent

36.90 not FCC allc. "KQA216" Cleveland, Ohio** 400mi*** 16:37EST 1/17/82
R "KQA 216, Cleveland, Ohio"
out Note: FD on a gov't freq.??

Boy! If everyone would send in such mysteries! Of course, I was thrilled because I happen to have the answers (partially) to these mystery stations. I immediatley sat down and wrote to Carl with the "vital" information:

* Means that this skip was no doubt from the British West Indies ("BIWI English"). A couple of business stations located in the West Indies have been received on 33.90 over the past few years by RCMA members on the east coast of the United States. Both sides of the conversation are on the same freq., and the speakers have distinct BIWI English accents. The distance from Carl's location in New York is about 2,250 miles. Not as far as England, but he makes up for it with the skip on 36.90.

**Means what Carl heard <u>really was</u> the Cleveland F.D. which actually operates with a repeater having an output frequency of 33.90 MHz.

***Is to tell you that the distance is actually closer to <u>5,400</u> miles, rather than the mere distance of 400 miles Carl had believed.

The explanation of the 36.90 MHz reception is that it's actually a foreign skip, originating in South America. Here we have the classic "two way" skip I have mentioned before. This 36.90 skip is believed to be from a construction company repeater located somewhere in Brazil or Argentina. An input freq. used by this repeater is on 33.90 MHz. U.S. fire traffic from 33.90 skips down to South America, where this repeater rebroadcasts the U.S. skip over 36.90. The 36.90 signal (often mixed with Spanish, Portuguese, BIWI Eng., and other noise) then skips back to the U.S. where RCMA members hear it and get all excited.

This particular skip on 36.90 has been active for well over a decade, with receptions reported back during the last sunspot cycle. Most of us, however, have only been able to discover this mystery station since the dawn of programmable scanners.

The 33.90/36.90 mystery repeater was a running topic of discussion in the newsletter for the last two years at least. If you want to brush up on this one and some related "two-way"/repeater skip, I highly recommened you refer to the following back-issues of the newsletter and see exactly how the facts fell into place. This skip is rather complex, possibly involving another freq. located around 44MHz. I personally find it very intriguing.

April, 1981 - Miscelleny, p.9 - "Skip, Sattelite, or Imagination?"
June, 1981 - International, p.72-73. (also discusses "San Tomé","two way"skip).
July, 1981 - Miscelleny, p.38
August, 1981 -International, p. 75.
April, 1981 - International, p. 37-38

on a related subject, see March, 1982 - International p.27: "San Tomé located", a followup on the discussion from June, 1981.

"Noteworthy Skip" received in Illinois

Among the few who responded to my "noteworthy" suggestion for reporting skip was Chuck Robertson (IL-141), who sent me a package of info. about some of the propagation signals he has received at his location south of Marion, Illinois. Here are a few:

30.76 MHz KF4375 - Harrahs Club, Reno, Nevada.
Logged by Chuck on 5/13/82 from 12:30 to 13:30 CDT. The freq. is apparently used by chauffeurs who transport patrons of Harrahs. Chuck states, "mobiles were heard picking up 'unidentified persons' and taking them to/from hotels/casinos. It's their policy never to tell the names of patrons over the air!"

39.50 MHz (call?)- "Med-fly base" (Calif. Dept. of Agriculture).
This was last heard by Chuck on 2/9/82 at 14:10 CDT. The freq. was used during the ariel spraying operations in central California done to control the Med-fly infestation.

Chuck also mentions that he often receives Spanish skip on the VHF-Hi freq. of 154.695. The closest Spanish speaking area (legally on the radio, that is) to Chuck's location in Illinois is the state of Coahuila in Mexico, almost 1,000 mi. away! Chuck didn't furnish me with any additional information about this skip, so I haven't a guess as to where it is from or what the useage is. I do know that 154.700 is used by the Mexican Federal Highway Police throughout Mexico. Perhaps Chuck can check to see if what he is hearing is actually .005 MHz above the freq. of 154.695.

THUNDER, LIGHTENING, AND IT'S POURING DOWN SKIP

Also from Chuck (IL-141) came a cassette tape recording of some night skip he received on 6/25/82. Much of the skip was from Florida and adjacent Gulf Coast states. The skip was no doubt related to the fact that severe thunderstorms were over the Gulf of Mexico and the southeastern coast at that time.

I'm using the skip that Chuck received as a sort of "case study" of storm related skip, especially the so-called "night skip". On the following page are two weather charts, which show the U.S. forecasts for the mornings prior to, and just after the propagation activity from the Florida area took place. Also shown are the printed individual forecasts for selected U.S. cities for the morning of the 25th.

Looking at the charts you can see that the thunderstorm activity was centered over Florida the evening that Chuck received strong skip from the Gulf Coast region. Comparing the two charts, you can see that by the next morning, the storm had begun to move inland, where it became weakened. The timing was just right for the storm to be strong enough that night to cause an atmospheric disturbance which produced skip.

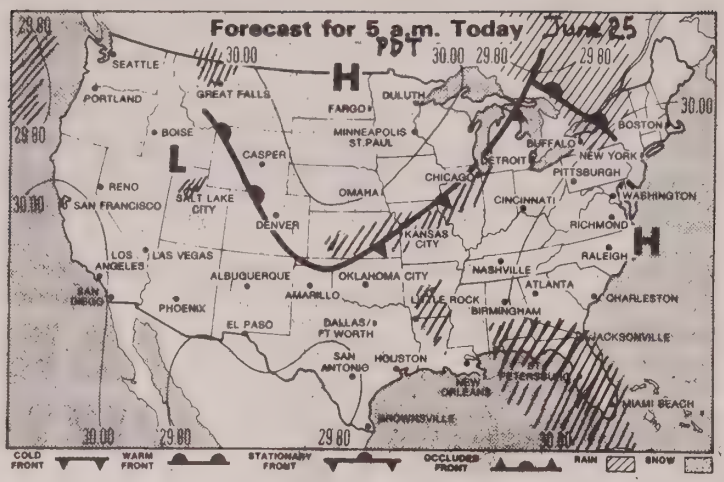

Chart shows forecast for 2 a.m., Friday, 6/25/82 - morning prior to night skip activity from Florida received by Chuck (IL-141). Note storm activity over Fla. (moving north). Below, individual city forecasts for Fri 6/25/82 and for Sat. 6/26/82. Thunderstorms over Florida, moving inland off Gulf of Mexico.

Charts and forecast information from the Los Angeles Times (6/25/82 & 6/26/82).

Reports and Forecasts From Across the Nation

Weather summary for selected cities, including overnight lows and daytime highs. Precipitation is for 24 hours ending at 5 p.m. PDT. 6/25/82 6/26/82

City	Thursday 6/24/82 Lo/Hi	Thursday 6/24/82 Precip.	Forecast/Fri. 6/25/82 Weather	Forecast/Fri. 6/25/82 Lo/Hi	Forecast/Sat. 6/26/82 Weather	Forecast/Sat. 6/26/82 Lo/Hi
Albany	46/74	—	Shwrs	52/80	Cloudy	57/74
Albuquerque	66/94	—	Sunny	61/95	Sunny	61/95
Amarillo	61/93	.01	Ptcldy	60/86	Ptcldy	63/88
Anchorage	47/61	—	—	xx/xx		xx/xx
Atlanta	66/89	—	Fair	68/89	Shwrs	68/86
Atlantic City	53/61	—	Ptcldy	58/73	Ptcldy	63/75
Austin	75/94	—	Ptcldy	73/94	Ptcldy	75/96
Baltimore	53/78	—	Sunny	58/84	Ptcldy	64/86
Billings	56/60	.08	Ptcldy	50/78	Ptcldy	55/80
Birmingham	63/89	—	Ptcldy	65/88	Tstrms	68/85
Boise	56/87	—	Ptcldy	59/86	Ptcldy	58/86
Boston	58/78	—	Cloudy	60/82	Ptcldy	62/80
Brownsville	79/97	—	Ptcldy	78/96	Ptcldy	79/97
Buffalo	50/70	—	Cloudy	59/73	Cloudy	58/76
Burlington, Vt.	48/70	—	Shwrs	53/75	Ptcldy	50/76
Casper	55/71	.60	Ptcldy	52/82	Ptcldy	53/81
Charleston, S.C.	74/84	—	Ptcldy	68/85	Cloudy	68/85
Charleston, W.V.	50/80	—	Sunny	52/83	Ptcldy	60/82
Charlotte, N.C.	66/81	.84	Ptcldy	60/82	Ptcldy	65/88
Cheyenne	54/68	—	Cloudy	53/72	Ptcldy	52/79
Chicago	54/82	—	Tstrms	63/75	Ptcldy	53/75
Cincinnati	52/78	—	Ptcldy	57/85	Tstrms	62/80
Cleveland	45/75	—	Ptcldy	55/79	Cloudy	59/75
Columbus, Oh.	46/76	—	Ptcldy	56/83	Tstrms	61/79
Dallas, Ft. Worth	67/88	1.25	Ptcldy	69/90	Ptcldy	71/92
Dayton	50/77	—	Ptcldy	55/84	Tstrms	61/79
Denver	55/73	.02	Ptcldy	54/90	Ptcldy	55/83
Des Moines	62/89	—	Cloudy	62/74	Ptcldy	57/79
Detroit	46/77	—	Cloudy	54/74	Ptcldy	51/75
Duluth	52/75	—	Ptcldy	47/69	Sunny	56/69
El Paso	61/100	—	Fair	64/100	Fair	66/100
Fairbanks	55/77	—	Sunny	56/82	Sunny	55/80
Fargo	61/87	.04	Ptcldy	48/73	Ptcldy	53/75
Flagstaff	42/77	—	Sunny	41/77	Sunny	41/78
Great Falls	53/73	—	Tstrms	50/78	Ptcldy	54/75
Hartford	53/78	—	Shwrs	55/82	Ptcldy	59/81
Honolulu	67/87	—	Sunny	69/90	Sunny	70/90
Houston	79/92	—	Ptcldy	73/93	Ptcldy	74/93
Indianapolis	53/78	—	Sunny	56/82	Sunny	62/79
Jackson, Miss.	69/92	—	Ptcldy	69/89	Ptcldy	72/91
Jacksonville	71/93	.53	Tstrms	72/89	Tstrms	72/88

City	Thursday 6/24/82 Lo/Hi	Thursday 6/24/82 Precip.	Forecast/Fri. 6/25/82 Weather	Forecast/Fri. 6/25/82 Lo/Hi	Forecast/Sat. 6/26/82 Weather	Forecast/Sat. 6/26/82 Lo/Hi
Juneau	44/77	—	Clear	48/75	Fair	49/76
Kansas City	63/87	—	Tstrms	63/77	Ptcldy	61/76
Las Vegas	71/100	—	Sunny	73/101	Ptcldy	72/97
Little Rock	68/86	.15	Tstrms	69/83	Ptcldy	69/86
Louisville	56/78	—	Sunny	61/85	Tstrms	66/82
Memphis	72/90	—	Ptcldy	70/88	Tstrms	72/88
Miami Beach	71/84	1.21	Tstrms	75/86	Tstrms	76/88
Milwaukee	53/82	—	Ptcldy	56/64	Sunny	48/70
Mpls./St. Paul	64/79	.63	Ptcldy	55/73	Sunny	55/76
Nashville	62/85	—	Ptcldy	59/86	Tstrms	67/85
New Orleans	69/91	.01	Ptcldy	73/89	Ptcldy	74/89
New York	61/77	—	Sunny	65/83	Ptcldy	66/79
Norfolk, Va.	60/79	—	Sunny	61/83	Ptcldy	65/86
Oklahoma City	64/82	.85	Ptcldy	62/80	Ptcldy	64/83
Omaha	66/87	—	Ptcldy	60/76	Ptcldy	61/80
Orlando	73/88	.01	Tstrms	72/89	Tstrms	72/83
Philadelphia	58/78	—	Sunny	60/84	Ptcldy	63/82
Phoenix	75/103	—	Sunny	74/105	Sunny	74/105
Pittsburgh	44/73	—	Ptcldy	55/80	Ptcldy	57/77
Portland, Me.	49/74	—	Shwrs	50/73	Sunny	54/74
Portland, Ore.	58/84	—	Shwrs	60/75	Rain	58/72
Providence	57/76	—	Cloudy	56/80	Ptcldy	60/79
Raleigh	66/76	—	Sunny	59/82	Ptcldy	62/88
Rapid City	58/66	.01	Ptcldy	57/78	Ptcldy	57/78
Reno	53/81	.01	Ptcldy	51/79	Windy	50/74
Richmond	67/82	—	Sunny	58/84	Ptcldy	64/85
St. Louis	61/84	—	Tstrms	67/84	Ptcldy	63/81
St. Petersburg	72/83	.20	Tstrms	74/88	Tstrms	74/88
Salt Lake City	58/87	—	Tstrms	64/88	Ptcldy	60/89
San Antonio	75/94	—	Ptcldy	74/94	Ptcldy	75/94
San Francisco	54/65	—	Ptcldy	55/70	Cloudy	53/65
San Juan, P.R.	75/89	.02	Ptcldy	75/89	Ptcldy	75/88
Seattle	56/86	—	Cloudy	57/74	Shrwr	56/68
Shreveport	66/89	—	Tstrms	70/88	Ptcldy	70/88
Sioux Falls	68/83	—	Ptcldy	59/77	Ptcldy	58/79
Spokane	59/88	—	Ptcldy	59/85	Shwrs	57/77
Syracuse	50/73	—	Cloudy	57/76	Cloudy	57/75
Tucson	63/99	—	Sunny	64/99	Sunny	66/99
Tulsa	67/77	.42	Ptcldy	64/82	Ptcldy	66/85
Washington	59/80	—	Sunny	64/86	Ptcldy	67/87
Wichita	66/73	.03	Tstrms	65/80	Ptcldy	63/85

Heaviest part of storm in Miami on Thurs.

Storm moving inland off Gulf of Mexico

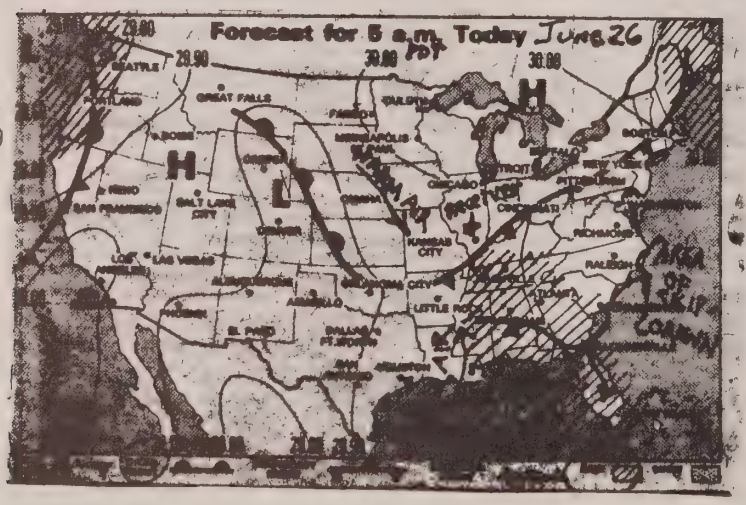

Chart at left shows storm activity over Florida at 2 a.m., E.D.T. on the morning of 6/26/82. Center of storm over central Florida, where strong skip originated a few hours before.

Chuck reports he monitored this night skip from 21:00 CDT to 23:30 CDT on Friday the 25th. Signals from Georgia to as far west as off the Texas coast were heard. Listening to the tape Chuck sent, it sounds as if Florida was producing the strongest signals. Refrences to drilling platforms and conversation of a maritime nature indicate that some of the signals received on the 33 MHz petroleum freq.s may have been from the Gulf of Mexico. Among the strong traffic from Florida, Chuck was able to confirm these ID's:

45.60 "KTR 746", West Palm Beach, Fla. (Ed note: ID heard on tape: "civil defence").

45.44 "KIV 708", Palm Beach, Fla.

45.16 "KUY 379", Tarpon Springs, Fla.

The most interesting skip Chuck recorded on the tape was some foreign traffic on 45.44 MHz. This particular station was using a digital scrambler, and would have been impossible to understand if the scrambler had not ceased functioning for a moment (was it turned off on purpose or not??). With the scrambler off, a Spanish speaker is heard to say, "Basa. Basa. Basa cielo". This translates, "Base. Base. Sky base." This is followed by: "Basa, Basa cielo, guesea." That particular phrase is repeated several times before the scrambler begins to operate again. If one listens closely to the scrambled portions of the transmission, enough can be understood to make it obviuos that "Basa. Basa cielo, guesea" is being repeated over and over again. Unfortunately, I am unable to translate the word "guesea" (GWESAYAH). I am spelling it as it sounds on the tape (Spanish words, unlike many English words, usually spell as they sound - if pronounced correctly, that is). I believe this is probably a proper noun (Guesea), as this word is not similar to any verb, regular or irregular. My guess is that Guesea is the name of the base which is transmitting and trying to contact "Sky base". In other words, if the full meaning of this transmission were to be put into a sentence, it would read: "Calling Sky base, this is Guesea base."

Chuck mentions that he has heard skip from this station before, and wonders if it might be from Cuba. This could quite possibly be the location of origin, as it would be in the same area (Florida region) from which the strong night skip was coming(this Spanish skip was part of the night skip heard on the 25th). Also supporting this theory is the fact that the dialect of the Spanish speaker seems to be of the "trade route" Spanish common to the Caribbean (and Cuba). Who and what the station is remains a mystery. Has anyone else received this "scrambled skip"?

If the rest of you want to catch some of this "stormy skip", make it a point to watch the weather forecasts in your local paper or on TV. Some weather maps don't tell the complete story, so check the forecasts for individual cities across the continent to see what areas are having storms or unusual weather. Remember too about those inversion layers - if an inversion condition is near the ground or covers only a limited area, VHF (both Hi and Lo) may be increased a hundred miles or so. If the inversion occurs at an altitude of several thousand feet and spreads over a wide area, VHF radio range may be increased several hundred miles or more!

INVERSION "DUCTING"

An interesting inversion condition is one that is sometimes referred to as "inversion ducting". This is a sort of atmospheric duct through which radio signals travel great distances - in some cases, over 2,500 miles! In such a case, it is believed that the temperature inversion creates a tunnel-like path in which radio signals take "multiple hops" and skip to other regions. Such ducts often spread signals up and down the east and west coasts of the United States.

In California, inversion ducting often occurs during the summer months, spreading VHF-Hi signals for great distances. In southern California, Hi-band signals have been pulled in from as far as the Oregon boarder, some 700 miles to the north.

The BBC and FRENCH TV

Reading a recent International column, I was reminded of the fact that those of you who live on the East coast of North America have a good chance to listen to some European TV audio when the MUF is high and skip is in.

The British Broadcasting Corporation's TV channel 1 audio, on 41.50 MHz has been received by RCMA members, along with French TV audio on 41.25 MHz. Ricky Stein, RCMA's International column editor, reported receiving both of these last November (at which time the F-2 skip peaked for the year). Unfortunately, both of these audios are AM signals (unlike U.S. TV audio, which is FM), so the quality will be kind of poor on an FM receiver.

From the "Foot in the Mouth" department

In my discussion of Spanish dialects last month ("Argentina on 35 MHz?"), I made a comparison of variations in dialects by stating " A person from Chile might have as much trouble understanding a person from Brazil as someone from New York would have understanding someone from the deep south of the U.S." If you think about this statement for a moment, you will realize that it is like comparing the difference between an apple and an orange to the difference between two varities of pears! Obviously a person from Chile might have difficulty understanding someone from Brazil, since Spanish is spoken in Chile, and Portuguese is spoken in Brazil. Although Spanish and Portuguese are similar (both are Romance languages), they have very distinct differences, and should not be confused. If you live in the continental United States, and have received skip which is in Portuguese, you can almost be certain it is from Brazil. Although Spanish is the language in the majority of Latin American countries, the speaking of Spanish is very much discouraged in Brazil.

I would like to say that I welcome all comments about this column, whether they be positive or negative. Constructive criticism is always accepted. I am open to change, so if you have any ideas about what should or should not be included in this column, and how it should or should not be presented, then I invite you to write me with those ideas. My position is that whatever works best for the format is what should be used. Along the same line, if you should see any error in this column, feel free to drop me a note. I would much rather know that I have made a mistake or inaccuracy, than to go on thinking I am correct because no one has informed me otherwise.

Incidentally, if you are just going to "drop me a line or two", you can do so on a postcard. These still only cost 13¢ to send via the U.S. Mail.

Corrections to list of 33.90 MHz dispatches

Here a some things which slipped by me in preparing the list of Fire dispatches which operate on 33.90 MHz, the first part of which appeared in the August column.

SOUTHERN STATES: add - Tennesse, Nashville F.D. KXQ736. Also note that NFD uses VHF and UHF radio.

MID. EASTERN STATES: - PENNSLYVANIA, Dauphin Co. Fire -

change call sign to: KGE633. The listed call is an error. change "F-1, dispatch" to "mutual aid freq." The Dauphin Co. dispatch moved to 33.80 a while back and is no longer on 33.90 MHz.

These are the only errors I am aware of at the present time. Any other changes will be so noted in the future.

33.90 MHz - Continued (and continued again...)

Being the wordy person that I am, I have managed to stretch what started out as a plan for a short column into a somewhat lenghty column. I had planned to wrap up this list of 33.90 MHz dispatches this month, however, that would mean adding another three and a half pages to what I already have. Therefore, I am going to break up what remains (New England States) and only publish New Hampshire this month (it is the shortest). The remainder may appear next month, however I will not promise anything. (After all, I had this list put together a year ago, so what is another month now?). Some of you may hate me for stretching it out like this (and some of you probably don't even care). Enough of this! Here's N.H.:

FIRE DISPATCHES

33.90 MHz

UNITED STATES

by region

(continued from August Newsletter)

STATE	AGENCY/AREA SERVED/ NOTES	FCC CALL	ID	CHANNEL	OTHER
NEW ENGLAND STATES					
NEW HAMPSHIRE	Lakes Region Mutual Aid (Regional dispatch for VFDs located in area surrounding Lake Winnipesaukee. Majority in Belknap Co.)*	KBZ283	"Lakes Region"	F-1, dispatch	New Hampshire State Forest Fire Service
	Note: Designators such as: "6-M-1", "9-X-1", "15-U-3", etc. First number indicates department, letter and last no. indicate unit.				
NEW HAMPSHIRE	Souheagan Valley Mutual Aid Association (Regional dispatch for VFDs in area of southern Hillsborough County)*	WRH261	"	F-1, dispatch	

* Indicates VFDs controlled by these dipatches are not listed here, as they are numerous.

Big deal? ~~right~~?

NEXT MONTH

Among the mound of material I already have planned for next month; More foreign skip...including a look at that interesting mystery station heard on 33.48 which is in reality on 33.475. This signal is heard as a constant carrier, so intense in the past that it has interfered with U.S. traffic on 33.48! More on this and other skip in the October newsletter.

I was just about to send this copy off to Carol Ruth, when the mail came with a note from Rick Matthew (CANA-002) who provides the following info. reguarding two foreign skips mentioned in the July column: "Re: 33.14 mentioned in your Low Band Skip column, there are about 40 mexican (stations) on here - fixed, base, and numerous mobiles. 100 watts." Rick also says that 33.14 has three Argentina stations-fixed, base, and mobile. In refrence to the Spanish sta. on 34.30, Rick informs me that there are about 10 Argentina sta.s on this freq. (fixed, base, & mobile). He obtained this information from monitoring station files. Many thanks to Rick for the information!

73, Mike

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 x 5 inches or larger, black-and-white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. Send photos or write to:

Hugh Stegman, 11622 Exposition Blvd., #2, Los Angeles, CA 90064

Greetings and welcome to your new Photo Department!

Before we get back to the pictures, this seems like a good time to go over some basic stuff. First, let me give you some bio on your new editor. I'm an L.A. boy, out of journalism school at UCLA and cinema at USC. I currently work in the film business, where I just finished a rather wild and crazy stint as assistant producer on a feature you'll get to see this winter. By the way, there isn't a movie or TV show that would ever get finished without constant use of two-way radios. So most of my monitoring is film industry, plus some public safety and marine. I use a BC 250, BC 160, and an all-band portable I take places where expensive radios get bagged. I'm also an ex-ham. If you're ever driving up toward Malibu on the Pacific Coast Highway, you might look for my old 50' tower and HF yagi up above the Bel Air Bay Club. The guy that bought the house couldn't figure out any cheap way to get it down!

This column, like this newsletter, belongs to you. Photos are one of the best information sources going, but keep in mind that they cannot stand alone. When submitting anything, describe not only what we see (a BC 220, a Regency, the Russian backscatter radar, or whatever), but also anything you've done to make it your own or to solve problems that the rest of us may also be having. Don't just tell us that your little box with knobs is a filter. Tell us what is being filtered out.

The other thing that makes this column exciting is the chance to see the sources of those tinny voices that fill our speakers when radios are used to save lives or help people do their jobs better. A good example is that neat Life Flight spread in the June '82 issue. Obviously, not everybody has access to emergency units or dispatch stations, but if you do, and if they'll let you take pictures, we'd sure like to see them.

Don't forget that photos for reproduction need to have more contrast then normal, and have to be in perfectly sharp focus. Glossy prints are best, and 5x7 is the best size for our layout process, although anything over 3x5 will do. Sorry, but we're not set up to run any color prints or slides, even in black and white. If you have any questions, just drop me a postcard before sending anything else.

Our first photo shows the monitoring post of Francis (NV-012), who lives in Las Vegas. From left to right across his big table, we see a phone (red, natch) and its answering machine, then three pocket scanners: a Fanon-Courier VHF-hi/UHF, an RCA UHF, and a BC 100. Right behind the BC 100 is a tape recorder connected to the BC 250 just to the right. Atop the BC 250 is a Super Sleuth de-scrambler and a Grove Scanner Filter used to eliminate VHF paging transmitters which, according to Francis, "cause havoc in most areas of Las Vegas". Next over is a BC 220, then two HF receivers: a Yaesu-Musen FRG-7 and a Realistic DX-160 with its external speaker. The DX-160 also covers 150 to 400 KHz. Up above these sets are a BC 210 and another Scanner Filter, which is connected to the Regency M-400 just to the right, along with another tape recorder. Finally, we see an all-band portable; the Realistic Patrolman-9.

RCMA

Radio Communications Monitoring Association

MARKETPLACE EDITOR / P.O. BOX 1329 / PALMDALE, CA 93550-1329 U.S.A.

MARKETPLACE AD REQUEST FORM (020182)

Circle One: FOR SALE FOR TRADE WANTED

Name:_____ Membership Number:_____

Residence Address (no P.O. Boxes or R.R. Boxes, but an actual street address:___

_____

City/State/Province/Zip Code/Postal Code/Country:_____

_____

Phone Number: (____) _____-_____

Mailing Address (if different from residence address):_____

City/State/Province/Zip Code/Postal Code/Country:_____

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Which of the following do you want included in your ad? (Check all that are desired):

___Residence Address ___Mailing Address ___Phone Number

.....

Your Ad: Make/Manufacturer:_____

Model Number:_____ Asking Price:_____

Additional information to be included in ad:_____

_____

_____

I hereby agree to abide by the guidelines currently established for the MARKETPLACE column. Should I receive money from other members for goods and/or services that I am no longer able to provide, I will immediately return that money to that other member responding to my ad.

Date:_____ Signiture:_____

FIRST NATIONAL AND INTERNATIONAL ORGANIZATION OF MONITOR RADIO LISTENERS

The large wall map just to the left of the 24-hour clock shows all local fire stations and their assigned equipment. Just below is a Metropolitan Police Beat map. Right of the clock is an Airport Obstruction Chart for nearby McCarran International. Not shown is Francis' latest piece of equipment, a Grove Scanverter for 225-400 MHz military aircraft. A nice, neat setup, Francis!

The next photo shows the installation of Vic Sumner in Kankakee, IL. Vic has managed to get a lot of equipment into shipshape fashion without it taking over the room. I'll just run down Vic's list:

TOP SHELF, LEFT TO RIGHT:

Motorola Director pager in charger; Ameco preamp for 42.50 MHz; Hallicrafters S-120 HF receiver; RCA rotor control for beam monitor antennas; Tenelec MS-2 crystal scanner; Realistic PRO-2 LF/HF tunable; E.F. Johnson Messenger 109 CB hand-held; Johnson

Code Call pager in charger; Johnson Mini Scan 4ch. pocket scanner; Allied Radio KG-220 lowband tunable monitor; RCA line voltage meter (what's the voltage dip with everything fired up, Vic?); Regency TL-1 42.50 MHz monitor radio.

MIDDLE SHELF, L. TO R.:

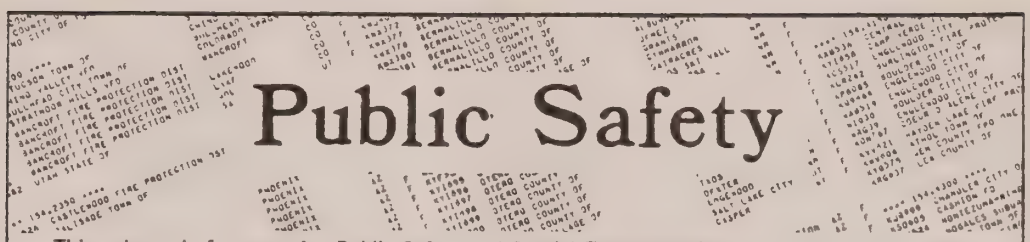
Regency TMR-1 UHF alert monitor; Regency TMR-4 VHF-lo 4ch. monitor; Regency Touch K-100; Regency TMR-8A 8ch. aircraft monitor; Regency ACT-A 9ch. aircraft monitor; 2 Adcom preamps; Pace Scan 10-4 UHF monitor; ACT-20 20ch. scanner; Regency TMR 8ch. for VHF-hi; Regency TMR 8ch. for low band; Regency Touch K-500.

DESK, L. TO R.:

B&K Cobra Dynascan 1000 GTL CB; E.F. Johnson Messenger 303 Business band radio and associated eqpt..

Left of the desk is another radio (Vic didn't say what band, but it looks like some sort of Midland base station). Associated licenses adorn the walls.

Well, that's it for this month. Let's do some serious clicking, and I'll see you soon.



Public Safety

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police; sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway & street maintenance, port authority/bridge maintenance, animal control, ambulances, paramedics, hospitals, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional Public Safety editor listed below.

PUBLIC SAFETY - CALIFORNIA

Send Public Safety and Special Emergency frequencies, radio system details and questions to:

Public Safety, California, P.O. Box 3962, Santa Fe Springs, CA 90670-1962

WELCOME TO THE SEPTEMBER 1982 ISSUE OF R.C.M.A. PUBLIC SAFETY-CALIFORNIA

Well, both of your P.S. California editors are really out there "busting their butts" (excuse the expression) doing research for this column. To be exact:

1. Eric went to Lexington, Kentucky to do an article for the Newsletter. (Actually, he went there to visit his girlfriend, but the Newsletter is more important, right? WRONG! (See attached frequency listing & article entitled "TOURING CALIFORNIA-by way of Lexington, Kentucky?!"
2. Someday, Eric will print "TOURING CALIFORNIA-Big Bear & Arrowhead". The reason for the delay is that I want to go back up there again this December for our annual family retreat. Come December, you'll see the article. Oh boy, something to anticipate! Excitement plus!
3. Mike spent about 10 days in Germany, Denmark and a few other cute little countries in that beautiful corner of the world. (Mike even met himself a nice, cute pen pal to write to. Rough life.
4. If all that doesn't make you feel miserable, guess who left for Hawaii for a few days away from it all? Yep, old Mike. Life is rough everywhere.

Enough about hard labor. On to the column.

Still from ERIC (CA-LA-045) (the better looking of the two P.S. California editors! Actually, Mike won't be reading this until everybody else sees it, so I thought I might sneak this one in just for fun!)

IRVINE POLICE DEPARTMENT (Station 39) Changes frequency from 460.175 MHz to 460.600 MHz. (R) Two thoughts on this: (1) Avoided interference from 3 other local PD's using the same frequency within 15 miles or so away. (2) Irvine PD had poor coverage into the southern limits of their city using the existing radio system on 460.175 MHz. Due to the other 3 cities sharing this frequency, Irvine PD could not use the extra RF power or additional transmit/receive sites that were necessary. Officers would need to switch to "ORANGE SOUTH" (460.200 MHz. R) (a countywide mutual aid channel) to communicate with their own dispatcher. Supposedly, this problem will be alleviated with the new frequency assignment and additional transmit and receive sites. ERIC (CA-LA-045).

Correction to August 1982 issue RCMA Newsletter:

462.575 MHz. Disneyland Hotel Security (Primary)
453.950 MHz. Anaheim Stadium and Convention Center Security

More good stuff:

From TOM (CA-LA-???):

San Bernardino County Sheriff makes frequency changes. Twin Peaks Station # 5 gets changed from 155.97 MHz. to 154.74 MHz. (Same channel as Big Bear Station # 6) Victorville Station # 7 gets changed to 155.685 MHz. The reasons behind this appears to be in effort to relieve congestion on the 155.97 MHz. channel which is used as simplex dispatch AND as the mobile input to the SBSO 159.210 MHz. repeater for the Central San Bernardino Station # 1. Anyone having further information on current or future frequency reassignments, please send them to the P.S. California editorial office.

One gripe:

From FRED (NM-???) Re article about Bishop/Bridgeport/Mono County area in June 1982 issue of RCMA Newsletter (page 70), Fred would like to say that he did not say that the CHP at Bishop were not happy with Mono County Sheriff dispatching. Editor's note: This comment about Mono S.O. dispatching for the CHP and the CHP's changing over to Bishop PD for after hours dispatching was given to us by another source. I appologize to Fred if there was any complications or problems related to this manner. ERIC (CA-LA-045). Fred advised us that Mono S.O. is a really good group and that their dispatching is actually quite good. So noted. (Don't forget to monitor 453.000 MHz. when in the Mono Co. area-this is the so called "Hotline" channel for inter-agency coordination.

Two good things to look into:

A.P.C.O. Bulletin published monthly by A.P.C.O. (Associated Public-Safety Communications Officers, Inc.) This is an excellent source of information related to the Public Safety radio field (right up our alley!) For dues and subscription information, write: A.P.C.O., 105½ Canal Street, P.O. Box 669, New Smyrna Beach, Florida 32069. PH# (904) 427-3461. I get this magazine every month and find it to be quite interesting. ERIC (CA-LA-045)

Century Book Shop, 6059 Essex, Riverside, California 92504. PH# (714) 687-5910. All kinds of interesting book titles covering electronics, shortwave radio, scanners, etc. are available at substantial savings over list price. Example: Robert Grove's Federal Frequency Directory, is available for $8.50 PPD. (Don't forget California state sales tax-the Gov. has to pay for his new Lears Jet and Jaguar somehow! Just kidding.) I've dealt with this company before and have had very good experiences. ERIC (CA-LA-045).

From CLIFF (CA-AL-029):

OAKLAND FIRE DEPARTMENT

FREQUENCIES: 154.355 CHANNEL "A" DISPATCH
154.430 (simulcasts with 154.355)
153.785 (city local govt channel) CHANNEL "B"

OAKLAND FIRE HAS TWENTY-THREE (23) ACTIVE FIRE STATIONS (HOUSES). SEVEN OF THESE STATIONS ARE KNOWN AS "DOUBLE HOUSES" (due to the fact that they have an engine and a truck). THE OTHER SIXTEEN (16) HOUSES ARE KNOWN AS "SINGLE HOUSES" (due to the fact that they have only an engine) [other special apparatus are not considered in these "house" discriptions]

FIRE STATIONS ARE NUMBERED ONE (1) THRU THIRTY-ONE (31)--BUT EIGHT (8) STATIONS HAVE BEEN CLOSED FOR NUMEROUS REASONS OVER THE PAST FEW YEARS. ONCE A STATION NUMBER IS USED, IT IS NOT RE-USED.

OAKLAND FIRE DEPARTMENT HAS FOUR (4) BATTALION CHIEFS (numbered 2-4-5-7)

BATTAION #2 HEADQUARTERS 1130 GROVE ST.
c/o 5 STATIONS
5 ENGINES

3 TRUCKS
1 SNORKEL
1 FIREBOAT
1 TANK WAGON
1 FOAM WAGON
1 HOSE WAGON

BATTAION #4 HEADQUARTERS HIGH ST. at MACARTHUR FREEWAY
c/o 6 STATIONS
6 ENGINES
1 TRUCK
1 P.A.L. (power/air/light)
2 TANK WAGONS

BATTALION #5 HEADQUARTERS 51st AT TELEGRAPH
c/o 6 STATIONS
6 ENGINES
1 TRUCK
3 TANK WAGONS

BATTALION #7 HEADQUARTERS 93rd AT E 14th ST.
c/o 6 STATIONS
6 ENGINES
2 TRUCKS
2 TANK WAGONS
1 FREEWAY RESCUE UNIT

OAKLAND FIRE DEPARTMENT HAS 8 OTHER BATTALION CHIEFS, USED FOR ADMINISTRATIVE PURPOSES.
TANK WAGONS ARE USUALLY FOUR (4) WHEEL DRIVE UNITS, USED FOR OFF ROAD USAGE
P.A.L. IS A UTILITY UNIT CARRYING EXTRA POWER/AIR/LIGHTS
OAKLAND FIRE USES A DIFFERENT KIND OF TERMINOLIGY THAN OTHER FIRE DEPARTMENTS IN THE BAY AREA. THEY IDENTIFY THERE ENGINES AS ENGINE COMPANIES, AND TRUCKS AS TRUCK COMPANIES.

RESUSCITATOR CALLS ARE HANDLED BY "ENGINE COMPANIES", (and by the way, they are called inhalators by the OAKLAND FIRE DEPARTMENT)

BATTALION #2--HEADQUARTERS AT STATION #1

STATION #1 1130 GROVE ST.
1-ENGINE, 1-TRUCK, BATTALION CHIEF, SNORKEL
STATION #2 29 JACK LONDON SQUARE
2 ENGINE, FIREBOAT
STATION #3 727 PINE ST.
3 ENGINE, 3 TRUCK,
STATION #12 822 ALICE ST.
12 ENGINE, FOAM WAGON
STATION #15 455 27th ST.
15 ENGINE, 4 TRUCK, HOSE WAGON

BATTALION #4--HEADQUARTERS AT STATION #31
STATION #4 1235 E14th ST.
4 ENGINE, 2 TRUCK
STATION #13 1225 DERBY AVE.
13 ENGINE, P.A.L. WAGON
STATION #16 3600 13th AVE.
16 ENGINE
STATION #21 13150 SKYLINE BLVD.
21 ENGINE, TANK WAGON
STATION #25 2795 BUTTERS DRIVE
25 ENGINE, TANK WAGON
STATION #31 3344 HIGH ST.
31 ENGINE, BATTALION CHIEF

OAKLAND FIRE DEPARTMENT

BATTALION #5--HEADQUARTERS AT STATION #8

STATION #5	934 34th ST.
	5 ENGINE
STATION #6	7080 COLTON BLVD.
	6 ENGINE, TANK WAGON
STATION #8	463 51st ST.
	8 ENGINE, 5 TRUCK, BATTALION CHIEF
STATION #10	172 SANTA CLARA AVE.
	10 ENGINE
STATION #19	5776 MILES AVE.
	19 ENGINE, TANK WAGON
STATION #24	6226 MORAGA AVE.
	24 ENGINE, TANK WAGON

BATTALION #7--HEADQUARTERS AT STATION #20

STATION #18	1700 50th AVE.
	18 engine, 6 TRUCK
STATION #23	7100 FOOTHILL BLVD.
	23 ENGINE, TANK WAGON
STATION #26	2660 98th AVE.
	26 ENGINE, TANK WAGON
STATION #27	8501 PARDEE DR.
	27 ENGINE, FREEWAY RESCUE UNIT
STATION #29	1016 66th AVE.
	29 ENGINE
STATION #20	1270 93rd AVE.
	20 ENGINE, 7 TRUCK, BATTALION CHIEF

From DAVID (CA-SF-025):

FROM AROUND THE SAN FRANCISCO BAY:

FINALE ON MARIN LAW ENFORCEMENT:
Regarding unit IDs:
City Numbers: Twin Cities(20); San Anselmo(4); Ross(6); Novato(13)
(Exception: 4T is Ross Valley Traffic Service).
Unit Type: K is corporal; P is parking enforcement; H is ?
Codes: 10-33 alarm sounding; 11-48 transportation; 11-86 traffic stop
Code 5 investigation; 11-55 process service; 10-10 (state location); 10-87 (meet this officer); 10-65A (missing adult)
Code Blue: Emergency

Control 50: County Com broadcast on all channels (all points bulletins)

SAN RAFAEL FIRE STATIONS:
Frequency is 46.2; Base identifies as San Rafael Fire:

Station 1: C St at 5th Ave
(Headquarters, com, Rescue 50 (Paramedics)
(Engine 1, Squad 1, Truck 1)

2: 3rd St at Union St
(also training facility

3: Joseph Ct & Civic Center Dr

4: Castro St & Bellam Blvd

5: Pt. San Pedro Rd bet. Peacock & Knight Sts

6: Ganado Rd and Freitas Pkwy

7: Civic Center Dr and N. San Pedro Rd

MARINWOOD FIRE DISTRICT(46.5)
Station is at Lucas Valley Rd nr. Miller Creek Rd.
(46.5 is a countywide frequency for city FDs; Base is Control 6) (County)

David's contribution continued on page 68.

RMA ELECTRONICS CO.

RMA ELECTRONICS
NEW ADDRESS:
32 Mountain Home Road
Londonderry, NH 03053
Telephone: (603) 432-4158

Bearcat 250

The Bearcat® 250 with more than 30 separate and distinct functions is designed with the professional scanner in mind. Since it's crystalless, programming 50 frequencies in infinite frequency combinations is as easy as pushing a few buttons. With its incredible "non-volatile" memory, the *Bearcat* 250 searches out frequencies, stores them in memory for later retrieval, and even counts transmissions by frequency. It's also a fine quartz crystal clock. The capabilities of the *Bearcat* 250 almost defy imagination. If you want the ultimate scanner available today, this is it.

BC 250 ..... **$284.99**

EUROPEAN MODEL ALSO AVAILABLE

RMA also handles . . .

EUROPEAN BEARCAT Model 220 and 250s These sets cover the 66-88 MHZ European Band. Other frequency coverage — 146-174 MHZ and 420-512 MHZ .....

CANADIAN BEARCAT Model 20/20. This set covers 406-483 MHZ, 136-174 and 30-50 MHZ. Works great fro USA Federal Law Enforcement. **$389.00**

EUROPEAN REGENCY Model M400. This set covers the 66-90 MHZ, 136-174 MHZ and either 385-483 or 420-512 MHZ band.
M400 E **$389.00**

225-400 MHZ MILITARY AM RECEIVERS
RMA has had several good sets. Receivers meeting these specs with good sensitivity are hard to find. You must get on our waiting list... We'll notify you when a good set arrives!

USED SCANNERS . . . We buy used scanners-test and retune them. Are you looking for a good pre-owned scanner? Maybe for the car?

RMA Electronics guarantees everything we sell. **Money-back or fast repair service! No hassles! No excuses! WE BACK EVERYTHING WE SELL!**

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RMA loves trade-ins — Top $$$$$ for your used programmable scanner!
WE BUY USED SCANNERS — CASH
CALL RMA TONIGHT!
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YOU CAN LAY AWAY AT RMA

KENWOOD R-1000

COMMUNICATIONS RECEIVER

"Hear there and everywhere"...
easy tuning, digital display

The NEW R-1000 is a highly advanced communications receiver. FEATURES: Continuous frequency coverage — 200kHz to 30Mhz. Five-Digit Frequency Display; Quartz Digital Clock with ON/OFF Timer; Multi-Modes — AM (wide and narrow), SSB (USB & LSB) and CW; Three IF Filters; Effective Noise-Blanker; Built-In Speaker; Three Antenna Terminals; RF Step Attenuator; Easy-to-operate single knob tuning; Perfect for shortwave, medium wave and long-wave listening with optimum sensitivity, selectivity and stability.

Now In Stock . . . Only . $ 419.00

PAID ADVERTISEMENT

Complete realignment, RF tank circuits, track tuning and all I.F. stages - any scanner **$$35.00**

REGENCY M100 & M400 realignment to cover FBI, DEA, ATF, Secret Service, Treasury and other Fed Law Enforcement frequencies in the low UHF range **$40.00**

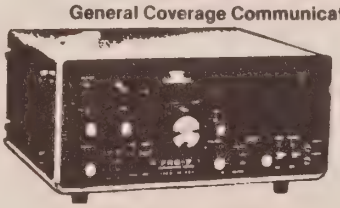
REGENCY T16K, K100, K500 and some Regency crystal scanners — we can realign to cover 135 - 168 MHZ and 410 - 485 MHZ. Low band remains at 30 - 50 MHZ **$40.00**

REGENCY M100 & M400 beep elimination **$19.95**

REGENCY M100 & M400 beep elimination switch **$35.00**

YAESU FRG-7

General Coverage Communications Receiver



- 0.5 - 29.9 MHz SSB/CW/AM
- Wadley Loop for high stability
- All-time favorite SW receiver

REG. $370.00 VALUE
NOW ONLY **$289.00**

prices do not include shipping

RMA REPAIR — MODIFICATIONS — REALIGNMENT — SERVICES

NATIONAL LAW ENFORCEMENT EMERGENCY CHANNEL 155.475 MHz
1981 STATUS REPORT

STATE	NLEEC Operational	Agencies Operating State	Local	Itinerant	Use Mutual Aid*	Other Public Safety	Has other mutual aid channels	State Emergency on other bands	Acronym of plans
AL	none	Daily use by ASP until new frequency is found							
AZ	yes	yes	yes	yes	no				
AR	none planned								
CA	yes			yes	yes	yes	yes	yes	CLEMARS
CO	yes	yes	yes	yes	yes				
CT	no								
DE	Planning by 12/81							154.860	
DC									
FL	no								
GA	1980	Keyed to Alabama frequency move							
ID	no plans								
IL	yes	yes	yes	yes	yes	yes	(Bases at ISP facilities)		ISPERN
IN	yes	yes	most				(Bases at ISP facilities)		
IA	yes	M	yes			AMB			
KS	planning	M/POE/Interstate		yes					
KY	yes, in two counties, bases at KSP				yes		(similar to IL SP)		
LA	yes		yes						
ME	yes	M	M	yes	yes	yes		154.695	
MD	yes	MSP							
MA	pending study								
MI	no, awaiting funds							155.865	MEPSS
MN	yes		yes	yes	yes	AMB			
MS	locally		yes	yes		FR/AMB			
MO	yes	yes	yes	yes	yes	FR/AMB (150)			
MT	planning for 1984 implementation						39.820 MHz		

NB	yes	yes	yes	yes	yes			
NV	yes	no	yes					
NH	yes	MRO	yes	yes	yes			
NJ	yes	yes	yes	yes	yes	yes	154.680	SPEN-2
NM	no							
NY	yes	yes	yes	yes	yes			NLERC
NC	planning							
ND	yes	yes				AMB (with permits)		
OH	1985	Daily use by OH State Patrol					154.935	LEERN
OK	yes	yes						
OR	yes	yes	yes	yes	yes		460.500 465.500	OPEN
PA	pending							
RI	yes						155.190	RISPERN
SC	no							
SD	no plans							
TN	yes	yes						
TX	no						155.370	
UT	no							
VT	yes	R	R (mobiles leaving state given NLEEC portables)					
VA	no							
WA	no	Daily use by WSP scheduled for abandonment 1981, emergency use thereafter					155.370	LERN
WV	planning							
WI	yes	yes	yes	yes		AMB (public owned)		
WY	no	awaiting funds						
AK	no plans							
HI								
PR								

SYMBOLS

AMB AMBULANCE	PD POLICE DEPARTMENT
BS BASE STATIONS	POE PORT OF ENTRY
FR FIRE/RESCUE	R RECEIVE ONLY
M MOBILES	SO SHERIFF OFFICE
MRO MOBILE RECEIVE ONLY	SP STATE POLICE
NA NOT ANSWERED	UNK UNKNOWN

CANADIAN PROVINCES

local implementation to match U.S. neighbor state

RCMP implement upon request by Division

Ontario P.P. planned

NAPA COUNTY:
POLICE: Napa Police, Napa Sheriff, Calistoga Police, and St. Helena PD all share 155.4300. BASE is NAPA 1. 32 units are Napa PD, and I believe 25 units are Sheriff. L are patrol units, and X are sergeants.
FIRE: All fire depts, districts, and CDF (serves as county fire) are on 154.4150.

BART POLICE:
Hq is at 800 Madison St., Oakland. F1 is 453.1500. Base is BART and units are 100 series. BART PD get VERY MAD if the press calls them security guards. BART PD will point to state laws making them peace officers. Standard 10 codes and penal code sections for crimes.

CALIFORNIA STATE POLICE:
In SF they are on 453.8250. Hq is State Building (350 McAllister St). Base is "San Francisco". Cars are 500 series. CSP apparently has detectives that are called "Sierra Units."
OAKLAND POLICE: In lieu of 10 code: 904 (message received); 909 (unit in service); 933 (alarm sounding); 922 unwanted guest); 947:suspect in custody, send transport unit). L units are patrol; X is sgt. and A units are wagons.

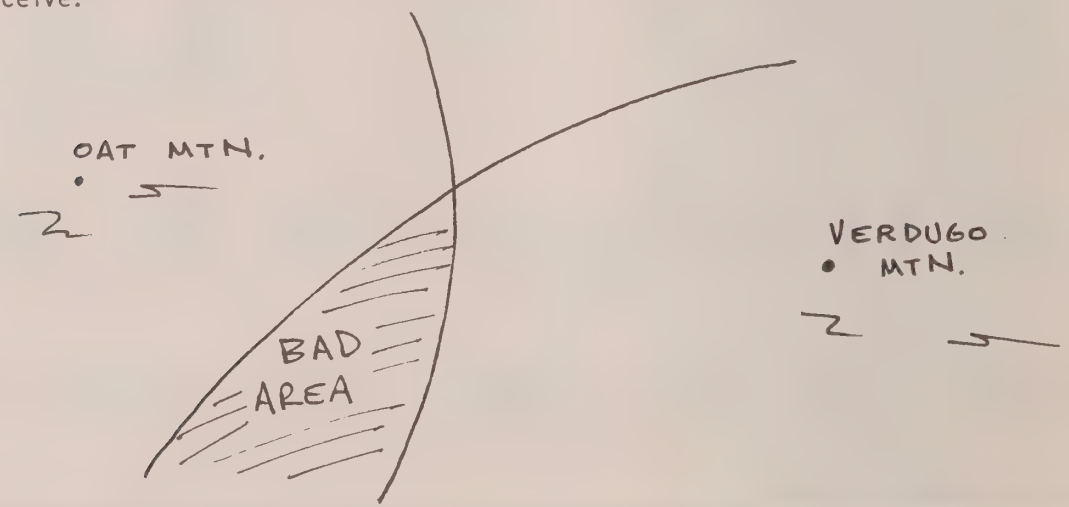
POLICE DEPARTMENT-City of Los Angeles

UHF "R.O.V.E.R." (Remote Out of Vehicle Emergency Radio) System

The LAPD system is certainly a modern and up-to-date communications system, but unfortunately, it has a lot of bugs, and mostly engineering errors. It's a good system maybe for tow trucks, or any business radio service, but the police operation puts a real demand on the equipment, and as such, the advanced radio systems just poop out! For example, when a walki-talki (rover) is transmitting on the input frequency (tx), it keys up two repeating sites, attempting to utilize the "capture" effect on F.M. But the "capture" effect doesn't work as good as it does on paper, resulting in lost information, repeated information, and many times just garble, because the officer on the other walki-talki (rover) who is attempting to receive, may have his rover slanted a bit, his rubber ducky shaking slightly, and he's standing next to his all steel police vehicle.

When the two repeaters are transmitting from different mountain top sites (For example: Oat Mountian and Verdugo Mountain) they are off frequency 6 KC. One site 3KC high, the other site 3KC low.

The biggest problem is when the officer and his rover enter the overlapping areas of transmission. Almost impossible sometimes to receive.



However, the system is a good one, if only the "bugs" can be taken out.

The Valley Bureau is due to receive the MDT consoles in black/white vehicles sometime in May '82. It's only four years behind schedule. Once the MDT's go into service, very little voice traffic will be heard, regarding routine calls. Officers will still use the tactical frequencies for emergency contact. (MDT = Mobile Digital Transport)

The following information is a list that the MDT's will operate on: (old VHF Dispatch Frequencies.)

	Known as	(Freq in MHZ) TX	RX
Valley MDT Data	19/D	155.58	159.030
Central MDT Data	8/A	155.07	159.15
South MDT Data	17/C	155.520 (77th Div)	159.18 (SE Div)
West MDT Data	7/E	155.01 (WLA Div)	158.865 (W Bureau Div)
Citywide MDT Data	27/B	155.19 (SWAT)	158.91 (WE Bureau Div)

The above are the only old VHF Frequencies (that will remain)

TAC 1	154.83 MHz.	Freq. 9	Simplex	TX/RX	Will remain
TAC 2	154.77 MHz	Freq. 6	Simplex	TX/RX	

To be used by DET headquarters units. Pagers will remain on TAC-1.

Channel	Frequency	Bureau	Division Using
1	506.7375	OCB-1	Central
2	507.1875	OCB-2	Northeast/Hollenbeck
3	506.9375	OCB-3	Newton
4	506.7125	OVB-1	West Valley/Devonshire
5	506.8875	OVB-2	Van Nuys
6	507.1625	OVB-3	Foot Hill/No Hollywood
7	506.7875	OSB-1	Not operational yet
8	506.9875	OSB-2	Not operational yet
9	507.2375	OSB-3	Not operational yet
10	506.7625	OWB-1	Not operational yet
11	507.2125	OWB-2	Not operational yet
12	506.9625	OWB-3	Not operational yet
13	507.0875	Emer Trigger	City Wide "help" calls
14	506.5875	Valley TAC	ROVER 4
15	507.2625	Central TAC	ROVER 5
16	506.8125	South TAC West TAC	ROVER 6
17	507.0375	Rover 7	Rampart TAC
18	506.8375	Metro	Not operational yet

The Above 18 UHF frequencies, the MDT frequencies, and TAC-1 and TAC-2 will eventually by the only frequencies LAPD will have. All other frequencies will be abandoned and given back to the FCC for reassignment.

No color code will be used for channel designations. Each Bureau has its own Rover 1, Rover 2, and Rover 3.

When the valley went to rover on December 18, 1981, all went okay until the motor cops found out they had no provisions for their rovers.

Valley traffic temporarily uses Rover 5. The old frequencies of 19, 8, 14, 16, are tied together at the receivers and when the RTO receives any unit on those frequenciees, she (RTO) thinks they are on Rover 5. That's

why you don't hear all the units. Only the Traffic units who actually have a Rover 5 will be repeated.

"Code Tom" in LAPD language means "requesting a supervisor with a "TAZER Gun" (the electrical shot - paralyzing weapons, only sgts. carry them.)

From ERIC (CA-LA-045):

Did everyone get a chance to listen in on the Space Shuttle Columbia? I did, and found it to be extremely bizarre and interesting listening to say the least. Here in the Southern California area, we (amateur radio operators) were presented with an extra special treat. JPL (Jet Propulsion Lab) in Pasadena, California, which works with NASA on the Space Shuttle and numerours other projects, supplied us with the audio from the Space Shuttle communications between Columbia and Houston Mission Control. The JPL Ham Radio Club, through direct audio from NASA to JPL was able to rebroadcast Shuttle communications via numerous ham radio repeater stations. Two of these were: 147.24 MHz. R (Mt. Lee) and 145.46 MHz. R (Buzzard Peak-Kellog Hill (Pomona)). Next time NASA sends something up, listen up on these frequencies for some bizarre listenings. (These frequencies, which are in in the 2 meter ham band, are easily programmed into most programmable scanners.

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Enough for this month, so says the paste up crew. See you all next month in the Star quadrent 4067, star date 1982.

****

(Kentucky article has been deferred until October 1982 issue. ERIC (CA-LA-045)).

PUBLIC SAFETY WEST

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming to:

George Hoggatt, 17473 E. 16th Drive, Aurora, CO 80011.

Summer is almost over. At least it will when you read this. For that reason I have made a list of highway frequencies for Colorado. These make interesting reading during the snow storms. In addition the low band State frequencies are used by the Colorado State Patrol. All mountain cars have them and most of the other do too. They use it to contact Highway units and as their "secret" channel.

LICENSEE	BASE	MOBILE	TYPE	REMARKS
State	47.020	47.100	simplex	channel 1
	47.020	47.020	simplex	channel 2 car to car
	453.200	453.200	simplex	Eisenhower Tunnel
Boulder County	156.180	156.180	simplex	
Denver, City and County of	151.115	159.000	repeater	some on police also
Douglas County	151.130	156.165	repeater	
Elbert County	37.900	37.900	simplex	

El Paso County	156.120	159.060	repeater
	156.225	159.180	repeater
Jefferson County	156.240	159.060	repeater
Kit Carson County	159.120	159.120	simplex
Lincoln County	151.028	?	repeater
Montezuma County	156.135	158.985	repeater
	156.195	?	repeater
Park County	159.105	156.075	repeater
Prowers County	156.195	159.015	repeater
Pueblo County	151.010	156.045	repeater
San Miguel County	156.180	159.045	repeater
Sedgwick County	151.040	151.040	simplex
Summit County	156.105	156.105	simplex
Washington County	156.135	158.985	repeater
Weld County	453.950	458.950	repeater
Aurora	156.195	159.120	repeater
Commerce City	45.720	45.720	simplex
Pueblo City of	156.105	158.895	repeater

If nothing else, these frequencies will give you the road reports straight from the "plow". In the case of counties that have no other radio licensed, these channels may be used for the sheriff too. At this time, I can't say for sure, but in a couple of weeks, I may have some idea as I am going out on a 4 day drive and listen safari in southeastern Colorado. One more note about the State channels: the control station at the Eisenhower tunnel operates on both the low band and UHF channels. On low band it is known as "Road Control" and handles the entire area from Georgetown to the top of Vail Pass including the signs warning of hazerdous conditions, at US 6 and I 70 near Golden, at the US 40 exit west of Idaho Springs, at Silverthorne.

DENVER Tim Tonge MO-070

The various persons, including security (I think) at the Denver Zoo and McNichol's Arena will be found on 153.815. This is a mobile only, mostly hand units channel.

SALT LAKE CITY, UTAH AREA Kent Haycock CASZ-004

Utah Highway Patrol, Salt Lake County	155.580	
Salt Lake County Fire	46.060	
Salt Lake County Sheriff	154.650	Ch. 1 east side of the valley
	154.370	
	154.785	
Salt Lake City Fire	154.430	main dispatch
	154.310	
	154.340	
Salt Lake City Police	460.100	Ch. 1 east
	460.150	Central
	460.200	Maybe west
	460.300	
	460.375	

The PD has been talking about scrambling their transmissons, but as of January 1982, transmissions remained unscrambled.

University of Utah Police	154.725	
Medical net ambulance to Hospital	155.340	(ed. national channel)
South Salt Lake Police	460.075	

Kent would like to know the frequencies for the following:

Utah State Fish and Game
Utah State Parks
Utah State Forestry

If you can supply this information, send it to me. I will forward it to Kent and print it here.

NEVADA Frank cajar NV-011

RENO, NEVADA P.D.

WHITE 453.575 KED327 Car to Car, Some special units *
BLUE 453.600 KOA303 Information, Vehicle Reg., etc.
GREEN 453.650 KOA303 Dispatch-Downtown, Northeast
YELLOW 453.700 KOA303 Dispatch-South, Northwest
These channels broadcast from an excellent repeater located on Peavine Mtn., 10 mi. west of Reno. I have been able to copy them in a mobile in Fallon, some 60 mi. east of Reno. R.P.D. uses two other UHF simplex freqs. for surveillance and undercover work, but as the traffic on these channels is quite sensitive, I feel they shouldn't be listed here. Use your experience and your "Search".
* WHITE channel is shared with Reno Animal Control during regular daytime working hours. It also has phone patch capabilities. Sgts., Division and Watch Commanders, D.A.'s detectives and Fire Dept. Officers carry Motorola Handi-Talkies with a built-in touch tone keyboard on the back of the unit that allows them to patch into the regular telephone system. All calls are timed by the computer in Central Comm. to 3 minutes, and are then automaticly disconnected. Dispatcher may manually override this feature, if the nature of the call requires more than that time. Some Reno P.D. mobile units are equipped with VHF high band transceivers to allow communication with other depts. such as Washoe County Sheriff and Sparks P.D.

OTHER RENO AREA FREQS.

RED 453.750 KOF356 Reno F.D. Dispatch/Fireground
460.550 KED327 Reno F.D. Digital Channel
46.120 KOF357 Sparks F.D. Dispatch/Fireground
158.745 KYX265 Truckee Meadows Fire Protection
158.880 KNBB761 Truckee Meadows Fire Protection
Truckee Meadows F.P.D. covers the unincorporated areas of Washoe County, working with USFS fire teams during fires on government land.
463.875 WQG942 A.E.S. ProMedic Ambulance
47.500 KOL780 AIDS Ambulance
462.975 Medic 1 Paramedics
All ambulances in Reno are equipped with UHF gear that covers all 8 MED freqs. Reno has two Care Flight Alouette III helicopters based at St. Marys Hospital and Washoe Medical Center. They can be heard on 123.500 as well as the Med freqs. They can also communicate with any law enforcement or S&R unit in the area with their VHF gear.

WASHOE COUNTY SHERIFF

155.520 KRC649 Main Dispatch (excludes Incline)
155.010 WYG379 BLUE Supervisors, Detectives
155.370 KEL477 County District Attorney's Officers
155.430 KRO449 Juvenile Division (Wittenberg Hall)
155.490 KAE769 County School District Security
155.310 KWI783 Incline Village area Dispatch
156.090 KOC80 CO & RP for above
156.800 WQA786 Lake Tahoe Marine Patrol
157.100 WQA786 " " " "
Pyramid Lake in the north end of the county also has a Marine Patrol. Try 156.425,156.450,156.600, 156.800, and 157.100, all under the call of KZV720.

155.205 KLR261 Sheriff's HASTY Team (S&R)
155.280 KRG625 County School District (School Busses)
Again, all sensitive WCSO freqs. have been deleted.

NEVADA HIGHWAY PATROL

42.940 KDT509 F1 Simplex in Reno area, see note.
42.780 KA6392 F2 Semi-Duplex w/42.940, see note.
42.700 KA6392 F3 Car-to-car
42.880 KAY930 F4 Simplex
F1 is not very often used between cars and dispatch; I have heard it used during the winter months when skip from South Carolina makes F4 virtually useless. Also used for car-to-car in certain mountain areas where the use of 42.70 would trip the microwave relays in the Winnemucca district some 120 mi. away! F2 is a mobile freq., which trips the relays to Reno. Dispatch uses 42.94 to reply. There are still a few VHF relays in use on 154.665 in some areas, but these are gradually being replaced by microwave units. F4 is used B/M within a 10 mile radius of Reno, however, if copy is poor in areas within this radius, dispatch may request the unit to switch to F2.

Nevada Gaming Commission and certain special units such as Capitol Police, State Attorney, and the like may be heard on 42.500 and 42.580.

Phoenix Ariz (Rod Sutter Az 047)

I have just become a new member in the Phx Az area and I am sending you in a list of some of the most common used frequencies used in the greater Phoenix area.This list is as of 6-25-82. They cover police fire and emergency vehicles. I will in the future months to come have more frequencies and in the next letter I will send you out some of the most common used codes in the Phx area. Just recently there was a change of frequencies for those of you who monitor Fire and Ambulance. The Phx Based Air Evac Ambulance (helichopter amb) has just changed their frequencies with the new Am Evac ground amb. The ground ambulance runs on 155.325 and the Air Evac had taken over the freq. of 464.250. The 464.250 is the main dispatch channel and they also run an extra channel of 469.250 which ~~xxxx~~ their is not much traffic on this channel. If there are some members in the Phx metro area that would like to get together with me and discuss and pass along some of our frequencies and just talk I would like to hear from you.

Phx P.D	Fire Dept.
1-154.890 chase	1-154.190
2-154.755 info	2-154.250
3-155.790 dick	3-154.070
4-155.790 south	4-154.280 medic
5-155.070 car to car	5-154.145 Tempe
6-155.640 north	6-154.310 Glendale
7-155.520 east	-154.370 Rural
8-155.430 west	-460.625 Rural Sun City
	-154.010 Mesa
	-159.450 Flagstaff
	-453.100 Tucson
	-453.200 Tucson

Glendale P.D.
156.210
156.670
154.830

Mesa P.D.
1-155.010
2-154.815

Tempe P.D.
1-155.685
2-154.710 car to car
3-154.965

Scottsdale P.D.
1-155.550
2-155.850

KINGS COUNTY WASHINGTON

This is another contribution from the Police and Fire Frequency Listing It is copyrighted twice. Once by the Police and Fire Listing and a second time when it is published here. This reprint is by permission of the first copyright holder. In the past I have said that the Police and Fire Listing was published by Stan Hintz OR-019. Stan has corrected me. It is published by Bob Gerhr WA-007. Stan acts as the go between from Bob to the Column to help the RCMA membership know first. This list is the product of several others, all members of the RCMA, including Rick (WA-001) who wrote the profile on the Washington State Patrol in the July newslet ter. This listing is an excellent publication. If you live in the Portland area, you should own it.

K I N G C O U N T Y F I R E P R O T E C T I O N D I S T R I C T S

DISTRICT 1 - DUWAMISH (DISPATCHED BY VALLEY COMM.)

F-1	154.070	(S)	FIRE DISPATCH
F-2	154.445	(S)	FIRE OPERATIONS
F-3	154.310	(S)	FIRE OPERATIONS
F-4	154.250	(S)	COUNTY WIDE MUTUAL AID

DISTRICT 2 - BURIEN

F-?	154.250	(*)	KOL244
F-?	154.415	(*)	KOL244

DISTRICT 4 - SHORELINE

F-?	154.010	(*)	KOF989
F-?	154.190	(*)	KOF989

DISTRICT 10 - ISSAQUAH

F-1	154.190	(S)	FIRE DISPATCH AND OPERATIONS
F-2	154.250	(S)	MUTUAL AID DISTRICT 25
F-3	154.280	(S)	CAR TO CAR
F-4	154.400	(S)	MUTUAL AID BELLVIEW AND REDMOND

DISTRICT 11 - WHITE CENTER

F-1	154.415	(S)	FIRE DISPATCH & OPERATIONS
F-2	154.250	(S)	AUX. FIRE OPERATIONS

DISTRICT 13 - VASHON-MAURY ISL.

F-1	154.250	(S)	FIRE DISPATCH AND OPERATIONS

DISTRICT 14 - BELLEVUE FIRE DEPT.

DISTRICT 16 - KENMORE

DISTRICT 17 - BLACK DIAMOND

DISTRICT 18 - FOSTER (DISPATCHED BY F.D. 11)

F-1	154.415	(S)	FIRE DISPATCH AND OPERATIONS
F-2	154.250	(S)	AUX. FIRE OPERATIONS
F-3	154.070	(S)	MUTUAL AID WITH VALLEY COMM.

DISTRICT 20 - BRYN MAWR (DISPACHED BY VALLEY COMM.)

F-1	154.070	(S)	FIRE DISPATCH
F-2	154.445	(S)	FIRE OPERATIONS
F-3	154.310	(S)	FIRE OPERATIONS
F-4	154.250	(S)	COUNTY MUTUAL AID

DISTRICT 24 - ANGLE LAKE

F-1	154.250	(S)	FIRE DISPATCH & OPERATIONS
F-2	153.830	(S)	TACTICAL FREQ. (MOBILE & PORTABLE)
F-3	154.415	(S)	MUTUAL AID
F-4	154.070	(S)	MUTUAL AID WITH VALLEY COMM.
F-5	153.755	(S)	COUNTY DEPT. OF EMERGENCY SERVICES
F-6	155.340	(S)	H.E.A.R.S.
F-7	155.220	(S)	SHEPARD AMBULANCE

DISTRICT 25 - EAST RENTON (DISPATCHED BY DIST. 10)

F-?	154.190	(*)	KWQ478, KFO790, KS9660
F-?	154.250	(*)	KWQ478, KFO790, KS9660

DISTRICT 26 - DES MOINES 154.250 KOL375

F-?	154.250	(*)	KOL375

DISTRICT 28 - ENUMCLAW FIRE DEPT.

F-1	155.880	(S)	FIRE DISPATCH AND OPERATIONS

DISTRICT 31 - AUBURN FIRE DEPT.

DISTRICT 34 - REDMOND FIRE DEPT.

F-1	154.400	(S)	FIRE DISPATCH AND OPERATIONS
F-2	154.205	(S)	FIRE OPERATIONS
F-3	155.340	(S)	H.E.A.R.S.
F-4	154.190	(S)	NUTUAL AID
F-8	154.515	(S)	ADMINISTRATIVE

DISTRICT 35 - CARNATION 154.190 KQ4516

F-?	154.190	(*)	KQ4516

DISTRICT 36 - WOODINVILL

F-?	154.190	(*)	KQI807

DISTRICT 37 - KENT FIRE DEPT.

DISTRICT 38 - NORTH - SNOQUALMIE FIRE DEPT.

DISTRICT 38 - SOUTH - N. BEND FIRE DEPT. (DISP. F.D.10)

F-1	154.190	(S)	FIRE DISPATCH AND OPERATIONS
F-2	155.340	(S)	AMBULANCE TO HOSPITAL (HEARS)
F-3	155.280	(S)	AMBULANCE/EMS COORDINATION

DISTRICT 39 - FEDERAL WAY

F-? 153.890 (*) KOL644
F-? 153.950 (*) KOL644, KZT533, WSZ389, WSZ399, WSZ400
F-? 154.220 (*) KOL644, KZT533, WSZ389, WSZ399, WSZ400
F-? 154.250 (*) KOL644, KZT533

DISTRICT 40 - SPRING GLEN (DISPACHED BY VALLEY COMM.)

F-1 154.070 (S) FIRE DISPATCH
F-2 154.445 (S) FIRE OPERATIONS
F-3 154.310 (S) FIRE OPERATIONS
F-4 154.250 (S) COUNTY MUTUAL AID

DISTRICT 41 - KIRKLAND F.D.

F-? 154.190 KQS783, KCT265, KWQ477, KXL237, KS9661
F-? 154.400 KQS783, KCT265, KWQ477, KWL237, KS9661

DISTRICT 42 - BOTHELL FIRE DEPT.

DISTRICT 43 - MAPLE VALLEY (DISPATCH BY VALLEY COMM)

F-1 154.070 (S) FIRE DISPATCH AND OPERATIONS
F-2 154.445 (S) FIRE OPERATIONS
F-3 154.310 (S) FIRE OPERATIONS
F-4 154.250 (S) COUNTY WIDE MUTUAL AID

DISTRICT 44 - LEA HILL

F-? 153.950 (*) KJF883
F-? 154.220 (*) KJF883
F-? 154.250 (*) KJF883
F-? 154.280 (*) KJF883

DISTRICT 45 - DUVALL F.D.

F-? 154.190 (*) KUI632 KUI632, KJ6290, KC7291
F-? 154.400 (*) KIU632, KIU631, KJ6290, KCT265, KC7291

DISTRICT 46 - NEUWAUKUM (DISPATCHED BY VALLEY COMM.)

F-1 154.070 (S) FIRE DISPATCH
F-2 154.445 (S) FIRE OPERATIONS
F-3 154.310 (S) FIRE OPERATIONS
F-4 154.250 (S) COUNTY MUTUAL AID

DISTRICT 47 - PALMER/SELLECK (DISP. BY VALLEY COMM.)

F-1 154.070 (S) FIRE DISPATCH
F-2 154.445 (S) FIRE OPERATIONS
F-3 154.310 (S) FIRE OPERATIONS
F-3 154.250 (S) COUNTY MUTUAL AID

DISTRICT 49 - SNOQUALMIE PASS

DISTRICT 50 - SKYKOMISH FIRE DEPT.

Well, that is it for another month. Not the largest column in the magazine but better than June. This one was easy for me as most of it was typed and all I had to do was tape it to a sheet of typing paper. But don't let that keep you from sending in your data. If you write it, I can type (sort of anyway) and that is what I get paid for (the pay is zip but so what?). Don't be like one member whose name I won't mention, he feels that what ever he sends in is of no interest. That is just not so. I read all of every column, and I suspect that most of the members do. I am not traveling to Missouri or Boston this year (as far as I know) but the information is of interest anyway. So if you haven't seen it here, send it in. Persons who have been listening only a few weeks have given me new frequencies, so don't think that everybody knows what you know. Chances are that you have information that somebody would give their eye teeth for.

As I have said in the past, SEND IT IN!!!!!!! Type it. Write it on your nice personalized stationary. Write it on the back of an old envelope. I don't care just as long as I have it in my grubby fat hands (I weight about 325 pounds give or take a QUITE few pounds).

Phil Lavette CO-022 has developed a computer program for finding possible image and harmonic frequencies. I have not had a chance to review and check the program so I'll save it for next month.

That is all for now. I expect every one of you to send me all those frequencies you listened to on vacation. Not tommorrow, but tonight, sit down any write it now! then put it in an envelope and send it to me on your way to work in the morning. I MEAN NOW!

George

PUBLIC SAFETY - SOUTH CENTRAL:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — Alabama, Arkansas, Louisiana, Mississippi, Tennessee, Oklahoma, and Texas:

Ken Pehl, 108 E. Centre St., Fredericksburg, Texas 78624.

Greetings and welcome to the newly revised column format called Public-Safety--South Central edition. I have been informed that the state of Tennessee is now under my column responsibilities. So Tennessee members please send in your info to this column so we can see the happenings in your area.

Once again I would like to remind South East Texas area members, as well as Louisiana and other Texas area members of the struggling attempts by some ardent Houston area RCMA members to form a Houston chapter of the RCMA. Initial response to the original call for chapter formation was rather disappointing--less than a handful of inquiries resulted. The frequency swapping and note-taking opportunities alone should be worth the effort to join such a chapter. Remember the more that are involved, the more frequency listings that can be swapped and more goods are available to rake over the coals---not to mention the communication facilities tours that are available to a group. I know for a fact the "chapter" will be continued on an informal basis even if no further member interest is shown. Therefore, you have only yourself to blame if you miss out on one of the best ways to increase your knowledge of local area radio systems, fatten the frequency notebook and have some fun at the same time. So think about it. For further information of the Houston chapter contact: Ed Lentz, TX-45, 1211 Vince, Pasadena, TX 77506 or Robert Barker, TX-76, 15311 Parkville, Houston, TX 77068.

This month's column begins by continuing the excellent series of articles by Russell, AR-3, on Arkansas state monitoring. This is the final article installment. Russell deserves a great deal of our collective appreciation for writing this excellent digest of information. Thank you, Russell!

MONITORING ARKANSAS (Part Three)
by Russell Brummett, AR-3

LOCAL GOVMT./ HIGHWAY

The Arkansas State Office of Emergency Services (OES) has it's headquarters at Conway with repeaters located throughout the whole state with an output on 158.745 and an input on 153.785. Activity can be heard relating to such various events as chemical spills, severe weather, and drills for nuclear accidents. Ham radio operators also have a very good weather net used in close connection with NOAA weather radio WXJ55, 162.550. They can be heard throughout the forecasted severe weather area calling in " on the scene " reports of wind speed and direction, estimated rate of rainfall, cloud descriptions, lightning, etc., all valuable information for the bureau in updating reports of tornado "watches" and "warnings". The ham repeater is on 146.940. NOAA's radar is perhaps more sophisticated but cannot see such things as flood water depths and trees uprooted as reported "live" by these seemingly fearless hams!

During the winter months the State Highway & Transportation Department keeps close watch on iceing and snow covering on roads and it dispatches graders, snow ploughs, salt trucks, and patrols to the trouble spots. See map for freqs. used in the 10 districts.

The State Health Department has assignments on four VHF-lo frequencies: 45.480, 45.600, 46.540, and 46.560; and on two VHF-hi frequencies: 155.835/158.955, base/mobile.

45.480 is in three locations and can be heard in Little Rock. 45.600 is only in Monticello and is not confirmed. 46.540 & 46.560 are each in 25 locations scattered statewide but their use is so far unconfirmed. 155.835/158.955 can also be heard here in Little Rock.

ARKANSAS STATE HIGHWAY & TRANSPORTATION DEPARTMENT

DIST.#	LOCATION	OUTPUT/INPUT
1	Wynne	151.055/156.045
2	Pine Bluff	151.085/156.075
3	Hope	151.100/156.105
4	Fort Smith	151.085/156.075
5	Batesville	151.085/156.075
6	Little Rock	151.070/156.060
7	Camden	151.055/156.045
8	Russellville	151.055/156.045
9	Harrison	151.100/156.105
10	Paragould	151.100/156.105

There are other frequencies assigned to the State at various locations, usually near some State University. In Little Rock 155.550/158.910, base/mobile is confirmed in use at The University Of Arkansas At Little Rock (UALR). Others not confirmed are 37.260 at Monticello and at Pine Bluff (UAPB), 39.100 at Texarkana, 153.905 and 154.965 at Little Rock, 154.955 and 155.775 at Fayetteville, 155.895 at Conway and at Magnolia, 158.820 at El Dorado, and several UHF freqs. as shown in Police Call.

On the local scene the City of Little Rock uses 158.760 for street maintenance, animal control, and garbage pick up during

daylight working hours, but the Police use it extensively at night and refer to it as channel 4 or 10-86-4.

Others confirmed are;

155.100 maintenance at Little Rock City Housing Auth. units
154.890 paging, City of Little Rock
155.715 Little Rock Wastewater Utility Dept.
453.250 Central Ark. Transit (CAT) Bus Co. main channel
453.300 " " " " " " 2nd "
453.975 paging, City of Little Rock
453.750 Little Rock Port Auth. (railroad switch engine)
45.280 Pulaski Co. Special School Dist., building maintenance
453.100 " " Road & Bridges
453.425 " " Sanitation Dept.
158.820 North Little Rock Water Dept.
155.745 " " " , various uses (also 158.880 & 156.015)
153.920 City of Benton
155.055 " " Bryant
154.085 " " Sherwood

STATE FORESTRY / FISH & GAME

The State Forestry Commission has 64 locations scattered statewide (see map), each with four VHF-LO channel assignments -- 31.580, 31.700, 31.820, and 31.940. The only activity noted here in Little Rock has been on 31.700 ("Conway tower"), therefore the others are not confirmed.

There are 24 locations, each with assignments on 151.220, 151.295, 151.430, and 151.460. All but three locations are in the southern half of the state with the others being in north-central Arkansas. Most of the activity has been monitored on 151.220 and 151.460 and they are especially active during dry weather times when forest fires are frequent. Aircraft patroling forest fires use 151.220 in this area.

Very recently one side of a conversation was monitored on 453.550 asking about the weather "over there". A search of FCC assignments reveals:

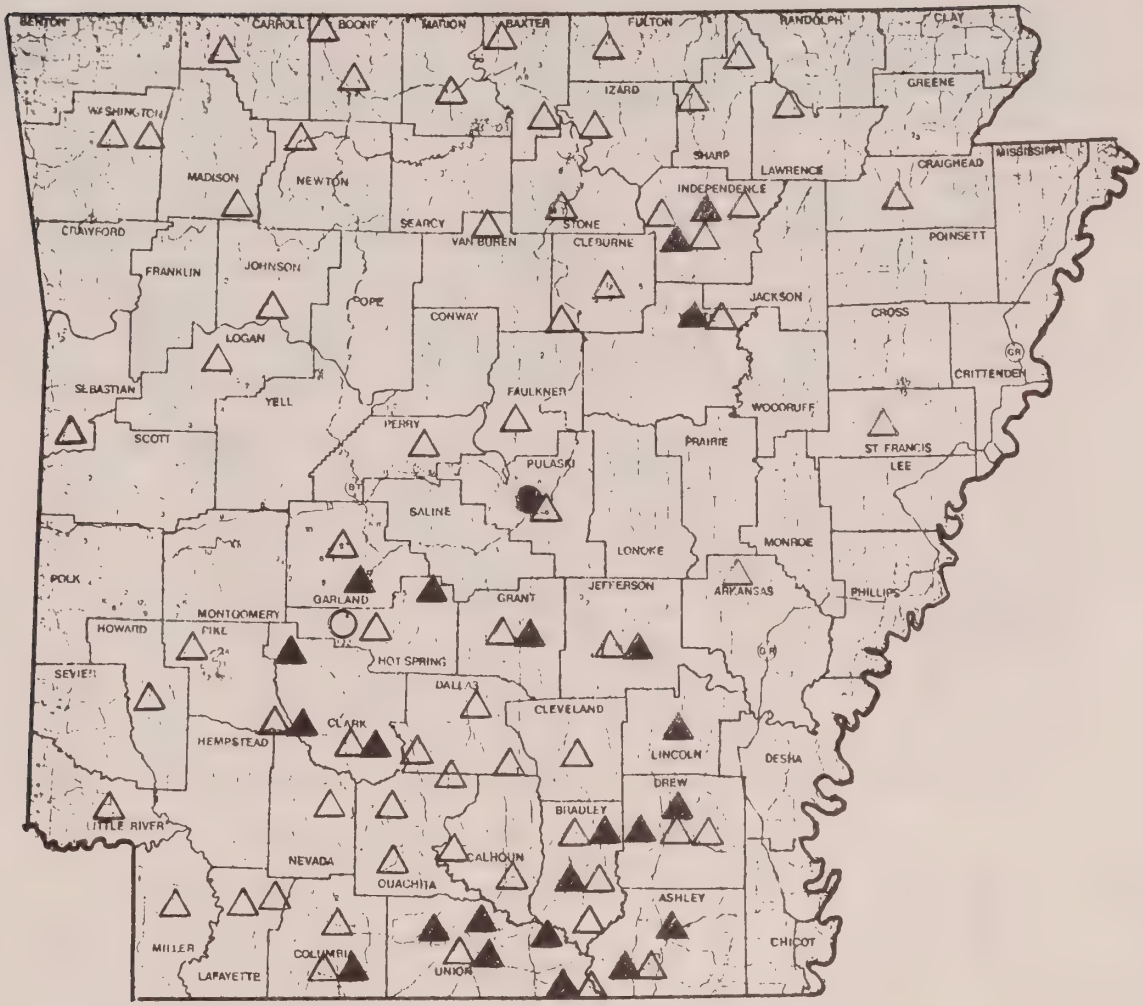
453.550 PO KKV42 FX1(fixed control station) Little Rock
458.800 PO " " (") "
453.800 PO KKV43 FB (base station) Bismark
458.550 PO " " (") "

Further monitoring should reveal just how this system is used.

The State Game & Fish Commission currently is assigned 159.330 at 13 locations scattered statewide, 159.420 at 8 locations scattered statewide, 151.385 at 12 locations scattered statewide, and 151.175 (Game Wardens) at 34 locations also scattered statewide (see map). 151.340 is assigned only in Little Rock but no activity has been observed.

In this area much activity is heard on 151.175 and somewhat less on 151.385.

ARKANSAS STATE FORESTRY COMMISSION



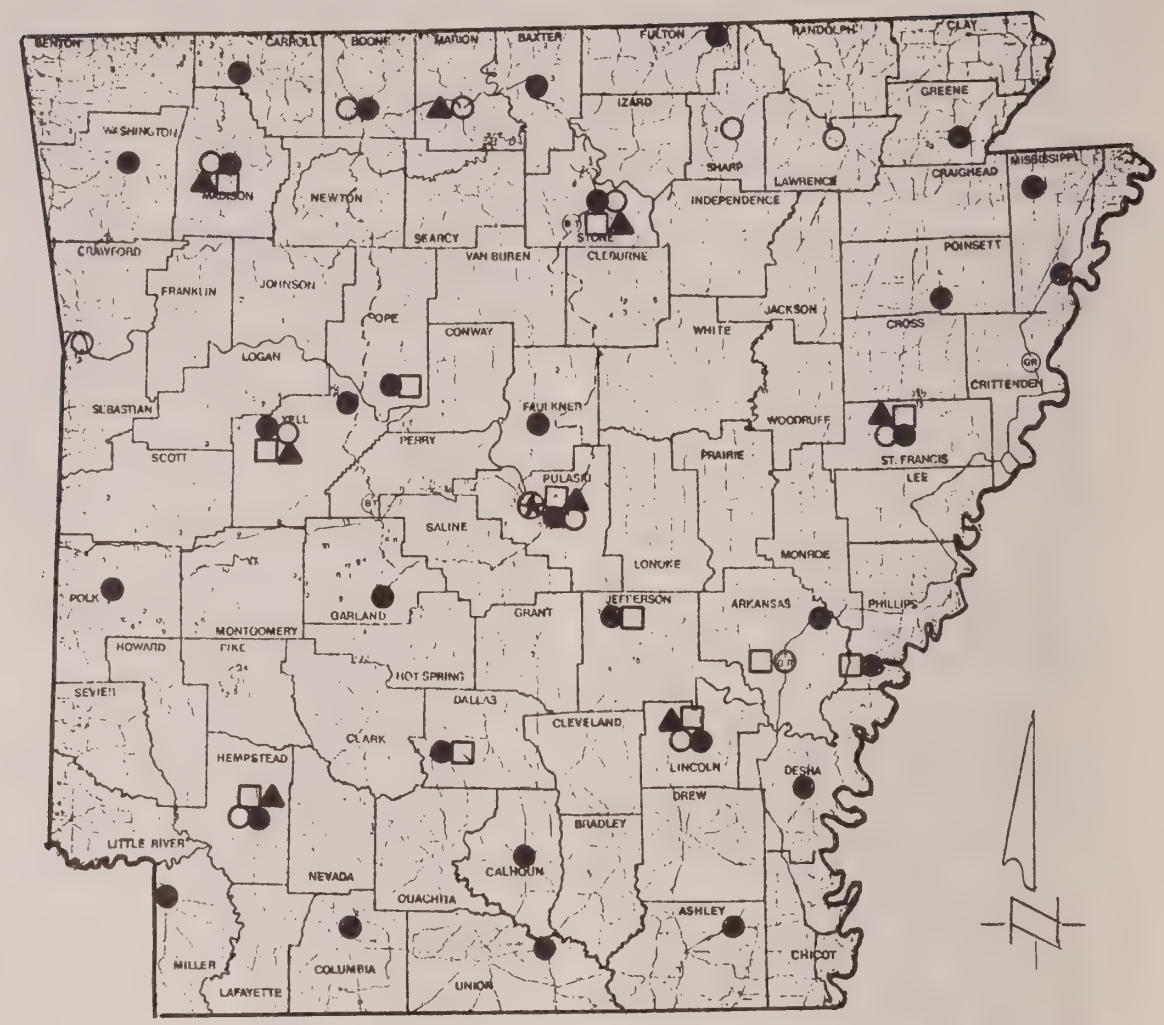
△ - 31.580, 31.700, 31.820, & 31.940 (64 locations).

▲ - 151.220, 151.295, 151.430, & 151.460 (24 locations).
Mobile call sign - KA4541

● - 453.550 and 458.800, KKV42, Little Rock

○ - 458.550 and 453.800, KKV43, Bismark

ARKANSAS STATE GAME & FISH COMMISSION



● - 151.175 - 34 locations (Game Wardens)
□ - 151.385 - 12 "
○ - 159.330 - 13 "
▲ - 159.420 - 8 "
⊛ - 151.340 - Little Rock only
159.375 - mobiles, call sign - KA6610

A series of short reports from various area members follows.

From MIKE, TX-81, of Bonham, TX:

North Texas and Southern Oklahoma Area Frequencies

Bonham PD/Fannin Co. SO 154.725 R (155.910 input)--KUE 477--combined dispatch
Bonham FD 46.46 B/M KDQ 266
Fannin Co. REACT 462.675 R Call u/k--GMRS
Durant, Okla. Highway Patrol---44.700 KKC 884-- Base to mobiles
44.900 ---mobiles to base
Oklahoma Inter-city 155.670 B/M-- statewide inter-agency
Lake Texohma Coast Guard 156.800--ch 16
Lake Texohma Marine phone 161.900--ch
U.S. Corp of Engineers 163.4375

(Editor's note: Some of the above frequencies are somewhat outside of normal

public safety bands, but I don't think the other editors mind.)

Mike gives us a further insight into his area's inter-state radio contact capability by adding the following narrative:

"Sherman (TX) DPS transmits on DPS base freq 155.460 and receives Durant, (OK) Highway Patrol on 44.700 and vice versa.

Denison (TX) PD transmits on Texas Inter-city, 155.370, and receives Durant (OK) PD on Oklahoma Inter-city, 155.670, and vice versa.

Bonham PD transmits on Texas Inter-city and receives either Durant, OK PD or OHP agency by utilizing a scanner as a receiver.

Hugo, OK PD has a Texas Inter-city transmitter/receiver and can call any nearby area TX station on it as well as receive calls on it also.

Furthermore, Texarkana (TX) DPS transmits on DPS base ch 155.460 and receives Hope, Arkansas State Police on 44.62, and vice versa. And Tyler (TX) DPS has been monitored calling Shreveport, LA, but in discussing the situation with one of their dispatchers, there is no direct means of a TX/LA radio contact at this time. Almost all Texas DPS radio installations are now equipped with programmable scanners."

Thanks Mike for that very interesting, informative report. I had suspected a cross-talk situation for inter-state contacts but this is the first confirmed report I have received of such a set-up. I personally found the tidbit about DPS bases using programmable scanners new news. It helps clarify a few things I have monitored in the past. I would like to point out this is the first bit of Oklahoma area frequencies to be received by this column editor. So, how about it, Oklahoma members? The pump has now been primed. Let's hear from your state!

From GARY, TX-94: Gary continues his regular supply of contributions with a brief report on Texas Railroad Commission radio activity in his area.

39.98 R (39.58 input)--KDC 289-- Kilgore--Texas Railroad Comm. agents
39.98 R (39.58 input)--WYZ 247-- Tyler--Texas Railroad Comm. agents
39.98 R (39.58 input)--KDC 329-- Lufkin--Texas Railroad Comm. agents

Gary notes these repeaters are used with autopatch capability (automatic phone patch) to directly phone in pipeline leakage reports to the pipeline companies. The Texas Railroad Commission has intra-state regulatory authority over railroads, truck lines, bus lines, pipelines, oil & natural gas production/distribution and some petroleum related utilities. (Editor's note: There are quite a few licenses listed in Police Call around the 39.xx MHz range of frequencies. Can anyone supply further details on the TRC radio system in general or report useage of the other stations listed? If so, write this editor immediately.)

From ROBERT, LA-30, of New Orleans: Robert reports to us on

New Orleans PD Radio System

Callsign: KKC 626

Ch. 1	460.025	R	PD District 1 & 8 dispatch ch.
Ch. 2	460.050	R	PD District 2 dispatch ch.
Ch. 3	460.100	R	PD District 3 & 7 dispatch ch.
Ch. 4	460.125	R	PD car-to-car ch.
Ch. 5	460.200	R	PD District 4 & 5 dispatch ch.
Ch. 6	460.225	R	PD District 6 dispatch ch.
Ch. 7	460.300	R	PD Tactical ch.
Ch. 8	460.325	R	Felony Action Squad
Ch. 9	460.400	R	Internal Affairs Div.

Thank you, Robert, for your listings. Apparently there are some minor changes from the way the listings are carried in the latest Police Call edition. This is exactly what we are always looking for to put into the column. Let's hear from you and from your state again!

We have gotten some updated reports from two Miss. state members on the Jackson, MS PD listings recently published. Both John, MS-17, of Hazlehurst, and Bill, MS-20, of Meridan, MS have sent in the following info:

JACKSON, MS AREA RADIO FREQUENCIES

Jackson PD: Callsign--KKD 295
F1 460.050 R Pct. 1 dispatch
F2 460.200 R Pct. 2 "
F3 460.100 R Pct. 3 "
F4 460.150 R Pct. 4 "
F5 460.250 R Detectives ch.
F6 460.300 R HQ/Traffic div. ch.
F7 460.350 R Phone Patch ch.
F8 460.400 R Car-to-car ch.

Jackson FD: Callsign--KKL 450
F1 453.500 R Primary dispatch
F2 453.800 R Secondary use ch.
F3 453.850 R Fire Prevention Div. ch.

Jackson Amb/Hosp.--155.400 B/M Call u/k--(ed. note: presumably dispatch)
155.340 B/M call u/k--(ed. note: presumably hosp/amb traffic)

Jackson Airport Authority--155.925 B/M KLY 287 Airport PD/security

John, MS-17 also wishes to update his listings as previously published in the Dec. 81 newsletter. Apparently a few departments have upgraded equipment and have changed bands.

CENTRAL MISSISSIPPI AREA Frequencies

Hinds Co. (Jackson)	155.595	B/M	KWF 640	--Sheriff Dept. dispatch
	155.490	B/M	"	--MS Statewide inter-city
Copiah Co. (Hazlehurst)	155.670	B/M	KNAF 201	--S.D. Dispatch
	155.490	B/M	"	--MS Statewide inter-city
Hazlehurst PD Ch. 1	45.46	B/M	KKW 894	--PD dispatch
Ch. 2	45.58	B/M	"	--PD car-to-car ch.

From BILL, MS-20:

Clinton PD	155.370	B/M	KDU 578	PD dispatch
	155.730	M		PD car-to-car ch.
Clinton FD	46.360	B/M	KSL 360	Fire dispatch
Pearl PD	155.685	B/M	KWH 613	PD dispatch
	155.490	M		used as PD car-to-car ch.
Pearl FD	154.220	B/M	KUE 492	Fire dispatch
Madison Co. (Canton)	45.10	B/M	KKL 201	S.D. dispatch
	45.34	B/M	"	S.D. car-to-car ch.
Madison PD/FD	45.56	B/M	KJJ 940	combined dispatch ch.
Canton PD	155.730	B/M	KXC 742	PD dispatch
Canton FD	155.820	B/M	call u/k	Fire dispatch
Canton Amb.	45.10	B/M	call u/k	same as Madison S.D. ch.
Ridgeland PD/FD	45.48	B/M	call u/k	combined dispatch ch.
Lauderdale Co. (Meridan)	45.14	B/M	KJA 922	Base-to-car ch.--S.D. dispatch
	45.26	M	"	car-to-base ch.
	45.22	B/M	"	MS Statewide Sheriff net
	158.775	R	call u/k	(153.905 possible input)-- Lauderdale Co. local govt.
Meridan PD	155.790	B/M	KKD 655	Base-to-car ch.--PD dispatch
	155.910	M	-------	car-to-base ch.
	155.730	M	-------	PD car-to-car ch.
Meridan, city of	154.025	B/M	call u/k	city local govt. ch.
	158.760	B/M	call u/k	city local govt. ch.
Meridan FD	154.250	B/M	call u/k	Fire dispatch
	154.445	B/M	call u/k	Meridan area VFD dispatch
Meridan Amb/Hosp.	155.385	Metro Amb.		
	155.280	Harris Amb. Service (KDP 979)		
	155.400	Jeff Anderson Hosp. (KSL 246)		

	155.220	F.G. Riley Mem. Hosp. (KSL 324)		
	155.355	Rush Hosp. (KTG 684)		
	150.075	Meridan NAS Hosp. (base hosp.)		

(ed. note: I would assume 155.340 or some such freq is used as an ambulance/hospital co-ordinating frequency?)

Neshoba Co.	45.42	B/M	KEP 625	S.D. dispatch
(Philadelphia)	45.38	M	-------	S.D. car-to-car ch. (assumed)
Neshoba PD	155.610	B/M	call u/k	PD dispatch (ed. note: this is not in Police Call.)
Philadelphia (MS) PD	45.46	B/M	KKR 655	PD dispatch

Miss. State Forestry ---151.145, 151.255 -- MS statewide
Miss. Power Company ---158.130, 158.220, 158.46 ---power company

And Bill and John would both like to remind readers of some important state-wide frequencies used by the above named agencies even though they may not always be listed with the agencies/cities listings.

45.22--simplex-- Miss. statewide Sheriff Net
155.490--simplex-- Miss. Statewide Inter-city (inter-agency ch.)
154.160--simplex-- Miss. Statewide Fire mutual-aid ch.
45.92--simplex-- Miss. State Civil Defense (see May '81 issue for more info)

With that we wish you farewell and hope to see you next month when we present more frequency information. So long!

PUBLIC SAFETY - NORTH CENTRAL:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — Iowa, Kansas, Missouri, Nebraska, N. Dakota, S. Dakota, and Minnesota:

Michael W. Scheel, RR #1, P.O. Box 221, Walcott, IA 52773

7/9 Welcome to RCMA North-Central. First a little about me. I'm 29 and single. I was a Marine for 4 yrs (72-76). I was a field radio operator. Never really carried them, just drove a jeep to a hilltop and set it up. One day at Camp Pendleton (between Los Angeles & San Deigo, for those don't know where it is) we set up a link between the north and south areas. Something had to go wrong because every thing was going perfect. About noon we told that we were disrupting LAFD on 33.70. So we move to our secondary freq. about two hours Later we found that SAn Deigo Sheriff on 45.70 was having trouble, so we just turned off the radios and went back to the barracks. Some days you never win. After that I got intersted in monitoring.

My current shack has 1 bearcat 250, a 220, a 4-6, and a Pro 2020, I also have a Sony 2001 for Shortwave.

Well on to the column!

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IOWA iowa iowa iowa iowa iowa iowa iowa iowa iowa iowa IOWA

The State of Iowa has one of the few integrated radio systems for Public Safety. Listed below are the standard channel plan for Police, Fire, and Ems. In future Columns I wish to show the freqs to each.

POLICE 1 OPS (Operations) BM
2 INFO (Information) B
155.910 m
3 LEA (Leatac) R
4 AID 155.475 BM
- PTP 155.370 B

(PTP = point to point)

FIRE 1 Operations BM
2 AID 154.280 BM

EMS 1 155.340 BM
2 Region EMS BM
3 local option
4 155.475 M
- 155.280 B PTP

Most City PDs are on UHF (population over 20,000). Fire depts are on VHF-Hi (except Tama County 33.70 and the City Depts of Des Moines & Davenport which are on the 460 fire freqs. No one to my knowledge uses 453 for firecomm.) The UHF MED Channels are not in use in fact Bettendorf School District uses 462.950R. Also several Vets use the freq in other parts of Iowa.

Iowa Methodist Hospital, Des Moines
Life Flight Helicopter on 155.175 BM
University of Iowa Hospital & Clinics, Iowa City
Air Care Helicopter on 155.205 BM
also on 155.340 & 155.475

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NEBRASKA nebraska nebraska nebraska nebraska nebraska nebraska NEBRASKA

From E.J. (NB-7) comes the first Nebraskan I believe to appear here.

OMAHA Police 1 460.100
2 460.150
3 460.225
460.275 Information
460.375 Command
460.42 Detectives
460.500 Emergency

++

KANSAS kansas kansas kansas kansas kansas kansas kansas kansas KANSAS

Audy (KS-14) has sent in quite a collection of information on the Sunflower state. However the information on the maps would not show too well at the smaller size in the Newsletter. So if you would like a Kansas State Patrol and a DOT map, just a 20¢ mint stamp and a SASE will get you one. (To me that is.)

Kansas State Patrol

Division	Location	Dispatch
1	Topeka	44.98
2	Salina	44.94
3	Hays	44.98
4	Chanute	44.94
5	Wichita	44.98
6	Garden City	44.94
9	Olathe	44.94

(is 7 or 8 the Turnpike ?)

	Base	Mobile
Dispatch	44.98	44.82
car to car	-	44.98
Dispatch	44.94	45.18
car to car	-	44.94

RESPONSE SIGNALS

Signal 1 Armed-Dangerous
Signal 2 Resists arrest
Signal 3 Mental
Signal 4 Suicidal
Signal 5a Known offender felony
Signal 5b Known offender misdemeanor
Signal 5c Known offender traffic
Signal 6 Intelligence subject
Signal 7 Snipers in area
Signal 8 Arsonist in area
Signal 9 Wanted-Felony
Signal 10 Wanted-Misdemeanor
Signal 11 Property or vehicle reported stolen
Signal 12 Bomb explosion at___
Signal 13 Officer needs assistance___

Kansas Police Codes

PROCEDURE AND OFFICER DETAILS

10- 1 Receiving poorly. (Move to better location)
10- 2 Receiving good
10- 3 Stand-by until no interference
10- 4 Acknowledgement
10- 5 Relay
10- 6 Busy, stand-by
10- 7 Out of service
10- 8 In service
10- 9 Repeat
10-10 Out of service, subject to call
10-11 Stay in service
10-12 Visitors, press or officials present
10-13 Weather and road conditions
10-14 Convoy or escort
10-15 We have prisoner in custody
10-16 Pick up prisoner at___, or papers at___
10-17 Nothing for you
10-18 Anything for us
10-19 Return to your station
10-20 Location
10-21 Call___by phone
10-22 Disregard
10-23 Arrived at scene
10-24 Finished with last assignment
10-25 Do you have contact with___
10-26 Holding subject, rush reply
10-27 Request drivers license information
10-28 Request full registration information
10-29 Check record for wanted or stolen

Kansas DOT

District	Location	Channel
1	Topeka	47.18
2	Salina	47.06
3	Norton	47.18
4	Chanute	47.06
5	Hutchinson	47.18

(according to an article in the APCO Journal, there are plans to use 47.12 or 47.20 to cut down on interfernce)

Weather & Road Codes::::::::::::

code 1 Weather clear
2 overcast
3 roads dry
4 roads wet
5 raining
6 mist
7 light snow
8 heavy snow
9 heavy snow with drifting
10 fog
11 windy (over 20 mph)
12 blowing dust
13 roads snowpacked
14 roads snowpacked in spots
15 roads icy
16 roads icy in spots
17 roads slushy
18 roads sanded
19 blizzard conditions existing
20 roads closed
21 one lane traffic

EMERGENCY OR UNUSUAL

10-30 Does not conform to rules and regulations
10-31 Emergency basis, all trooper 10-11
10-32 Chase, all units stand-by
10-33 Emergency traffic, station or unit
10-34 Trouble at___, all units respond
10-35 Major crime, blockade
10-36 No further assistance needed
10-37 No rush
10-38 Urgent (silent run)
10-39 Emergency (light & siren)

ACCIDENT AND VEHICLE HANDLING

10-40 Fatality report
10-41 Send wrecker to___
10-42 Officer___now at home
10-43 Meet___at___
10-44 Investigate vehicle
10-45 Investigate occupants of vehicle
10-46 Investigate drunken driver
10-47 Auto accident, property damage
10-48 Auto accident, personal injury
10-49 Send ambulance to___

NET MESSAGE HANDLING

10-50 Message for local delivery via public service
10-51 Any answer our number
10-52 Item number for assignment
10-53 Unable to copy phone. Use TWX
10-54 Stand-by for TWX traffic
10-55 Request permission to call mobile unit___ or to use channel___
10-56 What is next message number
10-57 Repeat dispatch
10-58 Have you dispatched___
10-59 Need radio service
10-60 Tower lights at___burned out
10-61 Repeat and transmit slower
10-62 Repeat and speak louder
10-64 Net clear
10-65 Clear for item
10-66 Clear for cancellation
10-67 Clear for net message, no item assignment

TECHNICAL

10-68 Give me a test
10-69 Test with no modulation
10-70 Test intermittently with no modulation for ___minutes
10-71 Test continuously with tone modulation for ___minutes
10-72 Advise signal strength
10-73 Advise audio quality
10-74 Audio quality good
10-75 Stand-by. You are interfering with other station in contact with this station
10-76 Signal choppy
10-77 No contact at all
10-78 Your quality poor. Transmitter apparently out of adjustment
10-79 Transmit on alternate frequency

GENERAL USE

10-80 Pickup your partner
10-81 Meet victim or complainant at___
10-82 Stopping suspicious vehicle
10-83 Road blocked at___
10-84 Personnel in area
10-85 Fire alarm at___
10-86 Advise correct time
10-87 Pistol range
10-88 Advise public service number for officer number___
10-89 Caution
10-90 Crime in progress
10-91 Breakin in progress
10-92 Armed robbery in progress
10-93 Bank alarm at___
10-94 Bomb threat at___
10-95 Fight in progress at___
10-96 Prowler report at___
10-97 Domestic problem at___
10-98 Riot or mass disturbance at___
10-99 Jail break at___

More Kansas information, this time from Richard (ks-21)

Kansas City, KS	police	Zone 1	155.610 Detectives
		Zone 2	155.430 South & West
		Zone 3	155.190 North & East
			155.370 point to point
	Fire		153.770
			154.280
Wyandotte County Sheriff			155.520

Johnson County Sheriff

	North Zone	158.730	159.150 BM

Dispatch for Fairway, Westwood, Merriam, & Roeland Park

	South Zone	158.775	159.030 BM

Dispatch for Stanley, Desoto, Gardner, & Stillwell

Fire	1	154.250
	2	154.205
	3	154.070

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I will have more from Richard & EJ next month. I would like to Also ask at this time for any State and local Roads maint radio info. I hope to have the DEC Column for this kind of information. Supposing the scientists are right we could be for a long cold winter.

PUBLIC SAFETY - GREAT LAKES:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows – Illinois, Indiana, Wisconsin, Michigan, Kentucky, and Ohio:

John Arendt, 327 Boulder Hill Pass, Oswego, Illinois 60543.

Greetings from Oswego and welcome to the "new" column-to be entitled "Public Safety-Great Lakes Area". With the recent change in formats-as approved by the Board of Directors and administrative officers-I'll now be covering Ohio and Kentucky in addition to the states of Illinois, Indiana, Wisconsin, and Michigan. (An easy rule of thumb is [illegible]as covered by Vols. 3 & 4 of the "Police Call"). Hopefully, my northeastern counterpart Rich Barnett will cover any OH material currently in his possession. With the recent sudden and untimely resignation of Mike Redman, any KY material "outstanding" eventually will filter in to this location for coverage. The previous transition periods (when I took over responsibilities for IL/IN/WI and then MI) went very smoothly. I'm sure that this period of transition will also go smoothly. Please be patient-I'll get all the material covered as best as possible.

One phase of the column that I will continue is the summary of RCMA chapter or group meetings in my responsible area. The Chicago area is always covered, but there may be ohter group meetings that I don't hear about. Should you folks away from the Chicago area hold a gathering, send the summaries in and they will be printed.

CHAPTER MEETING OF CHICAGO AREA APRIL 24th

The meeting was called to order at approx. 1:35 P.M. with 24 members and 3 guests from IL and WI present. The following agenda items were discussed:

1. Our guest speakers for the meeting was Chief Bernard A. Rubicz of the Bellwood, IL Fire Dept.
2. John Arendt spole on the latest club business.
3. Our new Federal/Military editor Dennis Biagioli (IL-026) was introduced and he discussed his new assignment.
4. A round table discussion was held among the members and guests on hand.
5. A short slide presentation was made by our new Federal/Military editor.

The regular meeting was adjourned around 3:30 P.M. and was folled by several hours of informal discussions by those in attendance.

Gary (IL-073) sends in more material about the IL DEPT. OF LAW ENFORCEMENT

1. The D.C.I. (Dept. of Criminal Investigation) is operating a base transmitter on the 154.950 mobile-only freq. ID is simply "Ida 900". Location is believed to be at the Zone 9 headquarters (separate from I.S.P. Dist. 9).
2. Y-units (Dept. of Revenue Investigators) have been monitored talking with "Revenue Base" on the 155.925 freq.
3. The Williamsville scale ("SC-34") apparently has a mobile extender in use so that troopers can utilize a portable while outside of the scale building proper. Signals eminating from "SC-34" on 155.505 are much stronger than mobiles operating in the Springfield area.
4. In a development concerning a related agency, the Dept. of Corrections apparently refers to "low band" as 37.36 (I've received reports of reception on this freq. from several areas throughtout IL-and from an IA member. It's apparent that this freq. will go "statewide".

Your editor reports that ILLINOIS STATE POLICE Dist. 20 (formerly 14A) at Pittsfield is in operation as of May 1st. The operating freq. as of May 3rd will be 154.680-with Dist. 14 to cease operations on the freq. at that time. As soon as more info becomes available, it will show in this column.

A most reliable source reports that Dist. 6A as Ashkum will attain full district status in July. The new dist. will be numbered 21.

My recent article on the MICHIGAN STATE POLICE has brought comments and updates from several of the MI members.

1. Terry (MI-062) called and passed on freq. info for the DETROIT AREA
   "Northville" Post 21 42.68 rptr. out (42.24 in)
      Dispatch Channel. Can also operate in the split freq. mode (42.68 base-42.24 mobiles) when the rptr. is shut off.
   "New Baltimore" Past 24 42.68 base and mobiles
      Dispatch Channel.
   "Ypsilanti" Post 26 42.48 base and mobiles
      Dispatch Channel
   "Pontiac" Post 27 42.94 rptr. out (42.30 in)
      Dispatch Channel
   "Detroit Expressway Patrol" Post 29
      Ch. 1 42.58 base - 42.74 mobiles Statewide
      Ch. 2 42.58 bases & mobiles Statewide
      Ch. 3 42.02 rptr. out (42.80 in) Tactical Freq.
      Ch. 4 42.64 rptr. out (42.18 in) Patrol Freq.
      Ch. 3 was originally set up to handle the "east side" and Ch. 4 was originally set up to handle the "West Side". Financial problems scrapped the plan.
   "Brighton" Post 12 is also using the 42.64 rptr. out (42.18 in) pairing.

As of April 1st, every M.S.P. car must ID with its car number on every transmission. The first 2 numbers always signify the post number (Example 29-20).

High band radios present in most M.S.P. cars seem to be the 6 channel variety. Freqs. present primarily are 155.370 (intersystem), 155.865 (MEPS), and the four "color-coded" M.S.P. high band freqs. The four M.S.P. freqs. are also found in cars away from the metro areas-for liaison work with the detectives.

M.S.P. cars in the Detroit area are also reported to have UHF capability. One or more of the M.S.P. UHF freqs. may be in use.

2. Terry (MI-097) reports on M.S.P. activity in the SOUTHWESTERN PART OF MI. Post 54-at New Buffalo-was closed down a few years back in a budget cutting move. The troopers remain as a team, or substation of Post 57 at Benton Harbor. The old 54-_____ designators are still used and Post 54 is manned on a part time basis-with calls being transferred to the Post 57 HQ when not manned. Mobile extenders are present in the mobile units. Portables operate on 154.695 and retransmit thru the low band radio-using the statewide 42.58 base and 42.74 mobile pairing. The 42.48 base and mobile freq. is used as the main operating channel for Posts 56,57 and 54 and also doubles as the post-post freq. for the entire 5th District.
The 42.68 freq. is installed in 5th District mobiles only. (No base capability). The troopers use it for a chit-chat channel or as a "more secure" channel. D.N.R. (Dept. of Natural Resources) units of the 12th District (corresponds to the area of M.S.P. Dist. 5) are being equipped with 42 MHZ radios using the 42.58 base-42.74 mobile statewide pairing. D.N.R. freqs. are primarily used during the daytime hours when offices are manned. M.S.P. freqs. come into use in the night hours when the D.N.R. offices are not manned.

Thanks to both of you for shedding further light on M.S.P. operations.

Tom (MI-091) reports that further "rptr. setups" are being planned around the state of MI for M.S.P. use. (Editor's note: Most likely, posts in the Lansing area will be next to change over to rptr. operation).

Martin (IL-125) sent in a listing of MUNICIPAL UNITS DISPATCHED BY THE KANKAKEE COUNTY S.D.

I-10 to I-19 Aroma Park
I-20 to I-29 Chebanse
I-30 to I-39 Essex
I-40 to I-49 Grant Park
I-50 to I-59 Huscher
I-60 to I-69 Manteno
I-70-to I-79 Momence
I-80 to I-89 Pembroke
I-90 to I-99 St. Anne

Momence units can also be found on 154.785-their "Channel 3". The county animal control commissioner is known as "Edward 30". A new county unit-known as "Edward 41" can also be found on the air. Exact designation is unknown.

Martin reports that IROQUOIS COUNTY S.D. UNITS have undergone a numbering change. All municipal units (except Watseka P.D.) are known as V-units. Some of those identified include V-21 Sheldon, V-36 and V-37 Cissna Park, V-46 and V-47 Gilman, V-66 and V-67 Clifton, V-71 and V-72 Chebanse. Actual sheriffs units are identified with number/letter/number designations. (Examples are 1A1=Sheriff and 3C24=_____. RS1 stands for radio man). The full breakdown on the sheriff's scheme is not known.

Martin completes his contribution with information about the WATSEKA P.D. Dispatch operations are found on the new freq. of 154.965 rptr out (input not known). A new call sign has been assigned. Intersystem operation can be found on 39.46 using the old call sign of KSB269 (formerly Iroquois S.D.)-with use of the freq. primarily for contact with Dist. 6 I.S.P. at Ashkum (using their old call sign of KIM608). Mobile units dispatched by Watseka are known as "W- " and "AX- " units.

Jeff (IL-064) and Mike (IL-014) combined to send in a joint contribution entitled CHICAGO F.D. RADIO SIGNATURES:

	ASSIGNMENT
2-1-1	Englewood F.A.O.
2-1-2	Main F.A.O.
2-1-3	Fire Commissioner
2-1-4	1st Deputy Fire Comm.
2-1-5	to
2-1-8	Deputy Fire Comm.
2-1-9	Director-Labor Rel.
2-1-10	Asst. Deputy Fire Comm.
2-1-11	to
2-1-16	Dist. Chiefs (1st thru 6th)
2-1-17	Training Director
2-1-18	Equipment Director
2-1-19	Personnel Director
2-1-20	Communications Director
2-1-21	Exec. Asst. to Fire Comm.
2-1-22	and
2-1-23	Dist. Chief-HQ
2-2-1	to
2-2-6	Deputy Dist. Chiefs (1st thru 6th)

BATTALION CHEIFS	
2-3-1 to 2-3-10	1 to 10
2-4-2 to 2-4-10	12 to 20
2-5-1 to 2-6-1	21 to 31

AMBULANCES	
8-1-1 to 8-1-10	1 to 10
8-2-1 to 8-2-10	11 to 20
8-3-1 to 8-3-10	21 to 30
8-4-1 to 8-4-10	31 to 40
8-5-1 to 8-5-10	41 to 50
8-6-1	Cycle Unit

ENGINE COMPANIES	
no change	1 to 129

TRUCK COMPANIES	
3-1-1 to 3-1-10	1 to 10
3-2-1 to 3-2-10	11 to 20
3-3-1 to 3-3-10	21 to 30
3-4-1 to 3-4-10	31 to 40
3-5-1 to 3-5-10	41 to 50
3-6-1 to 3-6-10	51 to 60
3-7-1 to 3-7-3	61 to 63

SQUAD COMPANIES	
5-1-1 to 5-1-6	1 to 6

SNORKEL COMPANIES	
6-6-1 to 6-6-6	1 to 6

MINI PUMPERS/AIRPORT	
1-5-1	O'Hare
1-5-2	

HOSE WAGONS	
6-1-1	Engine 5

DELUGE UNITS	
6-7-1	Eng. 23 Quarters
6-7-2	
6-7-3	Eng. 106 Quarters
6-7-4	
6-7-5	Eng. 47 Quarters

AIR/SEA RESCUE	
6-8-0	Commanding Officer
6-8-1 to 6-8-3	Helicopters 1 to 3
6-8-4 & 6-8-5	Sea Rescue Units 4 & 5
6-8-6	
6-8-7	Sea Rescue Truck
9-1-1 to 9-1-3	Light Wagons 1 to 3
9-2-1 & 9-2-2	Smoke Ejector Units 1 and 2

DRY CHEMICAL UNITS

6-2-1 & 6-3-6 Meigs
6-2-2 & 6-3-7 Midway
6-2-3 (Shops)
6-2-4 Eng. 79 Quarters
6-2-5 Eng. 80 Quarters
6-2-6 Eng. 26 Quarters
6-3-1 Eng. 34 Quarters
6-3-2,6-3-4,
6-3-5 O'Hare
6-3-3 Eng. 14 Quarters
6-3-8 Eng. 127 Quarters

CRASH TRUCKS

6-5-1 to 6-5-10 O'Hare
6-5-2 & 6-5-9 Midway
6-5-4 to 6-5-7 O'Hare
6-5-3
6-5-8

CANTEEN SERVICE

4-0-0 Canteen Supervisor
4-0-1 1st Dep. Supervisor
4-0-2 2nd Dep. Supervisor
4-1-1 Catholic Chaplain
4-1-2 Protestant Chaplain
4-1-3 Jewish Chaplain
4-1-4 Dept. Physician
4-1-5 Cheif Paramedic
4-1-6 Ast. Chief Paramedic
4-1-7 Dep. Director E.P.D.S.
4-1-8 Employee Relations Off.
4-1-9 Dir. Public & Internal Information

COMMUNICATIONS

4-2-1 Chief Fire Dispatcher
4-2-2 Asst. Chief Dispatcher
4-2-3
4-2-4 Communications Vehicle
4-2-5
4-2-6 & 4-2-7 Communications Maintainence & Repair
4-2-8 & 4-2-9 E.W.&C. Radio Repair

E.P. & D.S.

4-7-1 Crane/Wrecker
4-7-2 Medical Van/Triage Unit
4-7-3 Air Compressor
4-7-4 Eqpt. Van
4-7-5 Hazardous Material Vehicle
4-7-6 Deputy Chief
4-7-7 Chief Supervisor
4-7-8 1st Deputy
4-7-9 Duty Officer

REPAIR SHOPS

7-1-2 Asst. Dir. of Equipment
7-1-3 Supervising Engineer
7-1-4 General Shop Foreman
7-1-5
7-1-6
7-1-7
7-1-8 Air Mask Supervisor
7-2-1 to 7-2-3 Fuel Trucks 1 to 3
7-3-1 Electrician/North
7-3-2 Electrician/South

E.M.S

4-4-1 to 4-4-5 Dist. Supervisor 1 to 5
4-5-1 to 4-5-5 Field Officer 1 to 5
4-6-1 to 4-6-5 Field Officer 1 to 5

CITY OFFICIALS

4-3-1 Mayor
4-3-2 & 4-3-3 Escort Cars
4-3-4 Comm. Streets & Sanitation
4-3-5
4-3-6 Comm. Water
4-3-7 Comm. Sewers
4-3-8 Fire & Police Chairman
4-3-9 Mayor's Mobile Office
4-4-0 Mayor's Chief of Staff

TRAINING

4-9-1 Asst. Director
4-9-2 & 4-9-3 Photo Units
4-9-4

ACADEMY

4-8-1 Dir. Inspections & Auditing
4-8-2 Inspections & Auditing Unit
4-8-3
4-8-4 Safety Officer

REPAIR SHOPS (cont.)

7-4-1 Mechanic/North
7-4-2 Mechanic/South
7-4-3 Mechanic/Marine
7-4-4 Mechanic/Citywide
7-4-5 Mechanic/O'Hare
7-4-6 Automotive Tester
7-5-1 Dept. Messenger
7-5-2 Tow Truck/Wrecker(large)
7-5-3 Mobile Lube Truck
7-5-4
7-5-5 Ladder Delivery Truck
7-5-6 Tire Truck
7-5-7 Hot Start Vehicle
7-5-8 Tow Truck (small)
7-6-1 Oxygen Delivery Truck
7-6-2
7-6-3 Parts Truck
7-6-4&5 Supply Truck

7-8-1 & 7-8-2
Air Masks Trucks 1&2

Martin (IN-061) sent on some police freqs. in use in NORTHWESTERN INDIANA. I've summarized some of them as follows:

E. Chicago 155.580
Valparaiso 155.625
Chesterton 155.040
Porter Co. S.D. 155.940 rptr (154.710 in)
Merrillville & surrounding areas 154.785 rptr (155.850 in)/155.685

Tom (MI-038) reports that the KALAMAZOO CITY P.D. AND F.D. will merge later this year. (A policeman would also serve as a fireman and vice versa). No freq. changes are presently planned. Cutover to the "new system" should start by December.

This column comes to a close with

Happy Monitoring!

PUBLIC SAFETY - NORTHEAST:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows – New England states, New York, Pennsylvania, New Jersey, Maryland, and Delaware:

Richard Barnett, P.O. Box 428, Newton Highlands, MA 02161.

Hello once again from the northeast. During the summer I made plans to visit friends in Washington, D.C. for the fourth of July weekend. I had a good deal of frequency and code information available to me as D.C. used to be part of my territory, but I did have problems with a few things. I tried to reach Joe M. Lewis who used to live in the District area and who has always been a terrific contributor, but I was unable to. I did manage to get a hold of Maryland member Eric Schneider though and he was absolutely great in helping me out. Yep, wouldn't you know it, the first member I call was only too pleased to answer all my questions; it just goes to show you the quality and cohesiveness that RCMA people continually exude. Thanks again, Eric.

Anyway, I had a great time in the Capitol and the monitoring was great, but I did have some trouble understanding those almost-southern accents. Washington has got to be one of the best places in the nation for using a programmable portable. With all the sights one sees -the Smithsonian, the Capitol Building, the White House, the F.B.I. and the like- walking and taking the "Metro" is still the best way to get around and thus those hand-held units become invaluable. Along with the regular D.C. police there's the Capitol, U.S. Park and Metro departments along with so many other building security forces (JFK Center, Smithsonian, etc.) along with the federal action. I didn't mean to go on so long about an area that I don't cover any longer, but I was just so enthused about the monitoring down there that I had to get it in.

Input continues to be pretty good, please keep it up, except I still haven't received much from New England members -especially members in the north. Let's get going guys, I still would like to make separate regional sections for the column.

New England

From Maurice (RI-017):

Rhode Island Regional Incident Code (Part one)
used by selected towns in the state
NUMERICAL INDEX

Classification Code #		Offenses or Cases
0100	FORM 1	CRIMINAL HOMICIDE (CRIMES AGAINST PERSON REPORT)
0110		Murder and non-negligent manslaughter
0120		Manslaughter by negligence
0200	FORM 1	RAPE (CRIMES AGAINST PERSON REPORT)
0210		Forcible
0220		Attempted forcible rape

0300	FORM 1	ROBBERY	(CRIMES AGAINST PERSON REPORT)
0310		Armed--any weapon	
0311		Highway	
0312		Commercial house	
0313		Service Station	
0314		Chain Store	
0315		Residence	
0316		Bank	
0317		Miscellaneous	
0320		Strong-Armed--No weapon	
0321		Highway	
0322		Commercial House	
0323		Service Station	
0324		Chain Store	
0325		Residence	
0326		Bank	
0327		Miscellaneous	
0400	FORM 1	ASSAULT	(CRIMES AGAINST PERSON REPORT)
		(Use classifications ending in one (1) only if an assault was made upon on-duty or previously identified policemen.)	
0410		With gun	
0411		Upon police officer	
0420		With knife, cutting instrument	
0421		Upon police officer	
0430		With other dangerous weapon	
0431		Upon police officer	
0440		With hands, feet, etc., aggravated	
0441		Upon police officer	
0450		Other assaults, not aggravated	
0451		Upon police officer	
0500	FORM 2	BURGLARY	(CRIMES AGAINST PROPERTY REPORT)
0510		Forcible entry	
		Residence (dwelling: apartment, hotel, etc.)	
0511		Committed during night	
0512		Committed during day	
0513		Time unknown	
		Non-residence (store: office: etc.)	
0514		Committed during night	
0515		Committed during day	
0516		Time unknown	
0520		Unlawful entry--no force	
		Residence (dwelling: apartment: hotel: etc.)	
0521		Committed during night	
0522		Committed during day	
0523		Committed time unknown	
		Non-residence (store: office: etc.)	
0524		Committed during night	
0525		Committed during day	
0526		Committed time unknown	
0530		Attempted forcible entry	
		Residence (dwelling: apartment: hotel: etc.)	
0531		Committed during night	
0532		Committed during day	
0533		Time unknown	
		Non-residence (store: office: etc.)	
0534		Committed during night	
0535		Committed during day	
0536		Time unknown	
0600	FORM 2	LARCENY-THEFT	(CRIMES AGAINST PROPERTY REPORT)
		*Except of auto accessories or from an auto, use VEHICLE REPORT	
0610		$50 and over	
0611		Pocket-picking	

	0612	Purse-snatching
	0613	Shoplifting
	0614	From autos (except 0615)
	0615	Auto accessories
	0616	Bicycles
	0617	From building (except 0613)
	0618	From any coin-operated device (except 0617)
	0619	All other
0620		Under $50
	0621	Pocket-picking
	0622	Purse-snatching
	0623	Shoplifting
	0624	From autos (except 0615)
	0625	Auto accessories
	0626	Bicycles
	0627	From buildings (except 0623)
	0628	From any coin-operated device except 0627)
	0629	All others
0630		Under $5
	0631	Pocket-picking
	0632	Purse-snatching
	0633	Shoplifting
	0634	From Autos (except 0635)
	0635	Auto accessories
	0636	Bicycles
	0637	From buildings (except 0633)
	0638	From any coin-operated device (except 0637)
	0639	All others
0640		All Attempts
	0641	Pocket-picking
	0642	Purse-snatching
	0643	Shoplifting
	0644	From autos (except 0645)
	0645	Auto Accessories
	0646	Bicycles
	0647	From Buildings (except 0643)
	0648	From any coin-operated device (except 0647)
	0649	All others (Non payment of bills)
0700	FORM 2	AUTO THEFT (VEHICLE REPORT)
0900	FORM 2	ARSON AND BOMBING (CRIMES AGAINST PROPERTY REPORT)
	0910	Residence
	0920	Auto
	0930	Commercial house
	0940	Crops
	0950	
	0960	
	0970	
	0980	
	0990	
1000	FORM 4	FORGERY AND COUNTERFEITING (GENERAL CASE REPORT)
1010		Forgery
	1011	Forgery of a check
	1012	Utterting a forged check
	1013	Forgery or altering of public or other records
1020		Counterfeiting (except federal)
	1021	Counterfeiting coins, plates, bank notes, bonds, seals, etc.
	1022	Possessing or uttering counterfeit documents
	1023	Possessing, counterfeiting apparatus
1030		Other
	1031	
	1032	
	1033	

1100	FORM 4	FRAUD (GENERAL CASE REPORT)
1110		Checks with no funds or insufficient funds
1120		Worthless checks (no account with bank etc.)
1130		Accessory to issuing checks
1140		Obtaining money under false pretenses
1150		Fraud
1160		Impersonating an officer
1170		False weights and measures
1180		Extortion (except blackmail)
1190		Cheating and swindling ("Con" game, etc.)
1191		Evading Transportation fare
1192		Evading restaurand bill
1193		Evading gasoline station bill
1194		Evading hotel or motel bill
1195		
1196		
1197		
1198		
1199		
1200	FORM 4	EMBEZZLEMENT
1220		
1230		
1300	FORM 2	STOLEN PROPERTY (CRIME AGAINST PROPERTY)
1310		Possession of stolen proper
1320		Receiving stolen property
1330		Buying stolen property
1340		Buying and selling stolen property
1350		
1360		
1370		
1400	FORM 2	VANDALISM (CRIMES AGAINST PROPERTY)
1410		Automobiles
1411		Adult
1412		Juvenile
1413		Unknown
1420		Public buildings (except 1430) City,State Federal owned
1421		Adult
1422		Juvenile
1423		Unknown
1430		Schools
1431		Adult
1432		Juvenile
1433		Unknown
1440		Residences
1441		Adult
1442		Juvenile
1443		Unknown
1450		Other (stores, restaurants, factory, warehouses, etc.)
1451		Adult
1452		Juvenile
1453		Unknown
1500	FORM 4	WEAPONS (CARRYING, POSSESSING, ETC.) (GENERAL CASE REPORT)
1510		Carrying concealed weapon
1520		Possessing concealed weapon
1530		Carrying pistol without permit
1540		Carrying deadly weapon (nightstick Viol. 11-47-42)
1550		Buying or selling or manufacturing weapon without permit
1560		Buying or selling or manufacturing weapon unlawfully (except above)

1570		Person convicted of crime of violence having poss. weapon
1580		Removing or altering serial no. from a firearm
1590		All others
1600	FORM4	PROSTITUTION (COMMERCIALIZED VICE) (GENERAL CASE REPORT)
1610		Operating a lewd house
1620		Maintaining a lewd house
1630		Soliciting for prostitution
1640		Other
1700	FORM 4	SEX OFFENSES (GENERAL CASE REPORT)
1710		Adultery and Fornication
1720		Incest
1730		Sodomy
1740		Lewd and indecent acts
1741		Child molestation
1742		Improper proposals
1743		Immoral practices
1744		Exposing person
1750		Statutory rape
1760		Seduction
1770		Illegal cohabitation
1780		Other

New York

From Carl (NY-117):

Westchester County Fire Depts.

Radio Channels

F-1 46.26 Countywide dispatch channel used by all depts. except Yonkers (46.5), Mt. Vernon (154.145), Scarsdale (154.1), Hastings (156.0), and Elmsford (153.98), and Harrison (153.815).

F-2 46.14 Countywide Mutual Aid Channel used by all depts.

F-3 45.88 Used for inter-county communications and by the Fire Control Center in Hawthorne (KED-281) also called "60 Control".

Radio Codes

10-1 Call H.Q.
10-2 Roport to H.Q.
10-3 Test alerting
10-4 OK
10-5 Repeat message
10-6 Stand-by
10-7 Verify Address
10-8 In service by radio
10-9 Location
10-10 EMERGENCY-clear the air
10-11 Request radio check
10-12 Aided case
10-13 Cover ... Fire Dept.
10-14 Located at...
10-15 Dispatcher
10-16 False alarm

10-17 Responding to alarm
10-18 Returning from alarm
10-20 Proceed with caution
10-21 Multiple Dwelling fire
10-22 House fire
10-23 Need Additional assistance
10-24 Car fire
10-25 Brush fire
10-26 EMERGENCY-(other) A-Wash down, B-drowning, C-Resuscitator
10-27 Send police to scene
10-28 Smoke investigation
10-29 Report progress
10-30 Emergency over

Westchester County Fire Apparatus List

AMBULANCES

1 Hastings
2 Armonk
3 Mohegan Lake
4 Croton
5 Pelham
6 Mohegan Lake
7 Briarcliff Manor
8 Verplanck
9 Bedford
10 Hawthorne
11 Somers
12 Somers
13 North Tarrytown
14 Briarcliff Mnr. (res)

CHIEF CARS

2011	Ardsley
2021-3	Armonk
2031-3	Bedford Hills
2041-3	Bedford
2051-3	Briarcliff Mnr.
2061-6	Chappaqua
2071-3	Croton Falls
2081-3	Croton
2091-3	Dobbs Ferry
2101-8	Eastchester
2111	Elmsford
2121-5	Fairview
2141-2	Goldens Bridge
2151-5	Greenville
2171-3	Hartsdale
2191	Hawthorne
2201-3	Irvington
2211-2	Katonah
2221-4	Larchmont
2231-3	Town of Mam'k
2240-3	Mam'k Village
2251-6	Millwood
2261-3	Mohegan Lake
2271-3	Montrose
2281-5	Mt. Kisco
2291-4	Mt. Vernon (1-4)
2301-6	New Rochelle
2311-3	North Tarrytown
2321-3	N. White Plains
2331-4	Ossining
2341-3	Peekskill
2351	Pelham
2361-6	Pelham Manor
2371-7	Pleasantville
2381	Pocantico Hills
2391-3	Port Chester
2401-3	Pound Ridge
2411-3	Purchase
2421-4	Rye
2431-4	Scarsdale
2441-3	Somers
2451-6	South Salem
2461-3	Tarrytown
2471-3	Thornwood
2481-4	Valhalla
2491	Verplanck
2501-2	West Harrison
2510-9	White Plains
2521-2	Yonkers (Battalions) 1,2
2531-3	Yorktown
2551	Buchanan
2561	Vista
2581	Banksville

ENGINES

1-2	Pelham Manor
4-5	Pelham
10-2	Harrison
17-20	New Rochelle spares
21-5	New Rochelle
26	New Rochelle spare
27-31	Eastchester
32	Eastchester spare
33-5	Larchmont
36-7	Town of Mamaroneck
38-42	Mamaroneck Village
43-6	Hastings
47-50	Dobbs Ferry
51	Town of Mamaroneck
52	West Harrison
53	Scarsdale spare
54-6	Scarsdale
57	Scarsdale spare
58-64	Port Chester
65-8	White Plains
69	White Plains spare
70-1	White Plains
72-3	White Plains spares
74-5	North White Plains
76-80	Tarrytown
81-3	Valhalla
85-7	North Tarrytown
88-9	Thornwood
90-1	Pleasantville
92-5	Briarcliff Manor

96-101 Ossining
103-6 Mt. Kisco
107-10 Bedford
111-3 Pound Ridge
114 Katonah (res)
115-7 Katonah
118-9 Croton
120-4 Montrose
125 Montrose (res)
126-8 Verplanck
130-4 Peekskill
135 Peekskill spare
137 Elmsford
138-40 Goldens Bridge
141-3 Vista
144-6 Chappaqua
147-9 Croton Falls
150-2 Greenville
154-5 Hawthorne
156 Grasslands atttack unit
157-9 Banksville
161-2 Buchanan
163-5 Ardsley
166-8 South Salem
169-71 Hartsdale
174-6 Fairview
177-9 Irvington
180-4 Somers
185-6 Somers brush trucks
187-8 Armonk
189-90 Pocantico Hills
191-3 Rye
196-9 Bedford Hills
201-6 Mt. Vernon (1-6)
207 Mt. Vernon spare
209 FD Roosevelt Hosp.
210 Bedford
211 Bedford (res)
215-7 NYS Thruway
218-9 County Airport
227 Croton Falls Brush truck
228 Croton Falls (res)
230-2 Continental Village
234 Bedford Hills Corr. Fac.
235-6 Archville
237 Elmsford
238-9 Purchase
243 Ardsley antique
243 Pound Ridge brush truck
244 Millwood
245 Millwood Tanker
246 Millwood brush truck
247 Millwood
248 Millwood (res)
249 Armonk
250-7 Mohegan Lake
259 Pleasantville
260 Pleasantville (res)
264 North White Plains
265 West Harrison
270-1 Yorktown
272-5 Yorktown
276 Yorktown antique
277 Yorktown brush truck
278-9 Yorktown
300 Yonkers spare
301-4 Yonkers
305 Yonkers spare
306-14 Yonkers
315-20 Yonkers spares
325 Greenville
288-9 Armonk

FOAM TRUCKS
1 Mt. Vernon

JEEPS
1 Millwood
2 Goldens Bridge

LADDERS
2 Pelham
11-3 New Rochelle
14 New Rochelle spare
15 Eastchester spare
16-7 Eastchester
18 Somers
19 Town of Mamaroneck
20-1 Mamaroneck Village
22 Hastings
23 Dobbs Ferry
25-6 Rye
28 Scarsdale
31 Port Chester
32-4 White Plains
35 White Plains spare

36 Irvington
37 Tarrytown
38 North Tarrytown
39 Pleasantville
40 Briarcliff Manor
41-2 Ossining
43 Mt. Kisco
44 Croton
45 Peekskill
46-7 Hartsdale
48 Scarsdale
49 Valhalla
51 Yorktown
53 Purchase
8 Croton Falls
9 Bedford
11 Banksville
12 Valhalla
13 Chappaqua
14 Hawthorne
15 Katonah
19 Thornwood attack unit
20 South Salem

QUADS
1 Fairview
2 Elmsford
3 Chappaqua

61-3 Mt. Vernon (1-3)
64 Mr. Vernon spare
68-72 Yonkers
73 Yonkers tower ladder
74 Yonkers spare
75-7 Yonkers (res)
78 Yonkers spare
79 Yonkers (res)

LIGHT TRUCKS
1 Harrison
2 New Rochelle
3 White Plains
16 Mt. Kisco

SNORKELS
1 Bedford Hills
2 Verplanck
3 Mt. Vernon (1)

MINI-ATTACKS
1 Valhalla
3 Purchase
4 Town of Mamaroneck
5 Pleasantville
6 Armonk
17 Croton Falls
24 Montrose
27 Hawthorne

PATROLS
1 Valhalla attack unit
2 Eastchester
3 Rye
4 Port Chester
5 Thornwood
6 Armonk attack unit

6 Katonah rescue

TOWER LADDERS
1 Thornwood
2 Port Chester (AT-2)
3 Pelham Manor
4 Greenville
5 Pleasantville
6 White Plains
7 Larchmont
8 Montrose

UTILITY TRUCKS
1 New Rochelle
5 Town of Mamaroneck (retired)
6 Pelham Manor
7 West Harrison
8 Purchase
9 Hawthorne
10 Mohegan Lake

QUINTS
2 Elmsford

RESCUES
1 Larchmont
2 Mt. Vernon (1)
3 Fairview
4 New Rochelle
5 Eastchester
9 Valhalla
10 Mam'k Village ambulance
12 North Tarrytown
13 Elmsford ambulance
14 Ossining
15 Mt. Kisco
17 Katonah
18 Croton
20 Somers
21 South Salem
23 Continental Village
24 Goldens Bridge
25 Buchanan
26 Buchanan

TANKERS
1 Continental Village
2 South Salem
3 Goldens Bridge
4 Vista
5 Bedford Hills

2 White Plains
3 West Harrison brush truck
5 Pleasantville brush truck
6 Bedford Hills
7 Fairview
8 Katonah attack unit
9 Mamaroneck Village
10 Purchase
11 Mohegan Lake
12 Buchanan
13 Mt. Kisco
14 Croton
15-9 Yonkers
20 Yonkers (res)

New Jersey

From Jim (NJ-019):

Thought you might like some details on the Hunterdon County, NJ radio systems. I've collected this data over the past year after moving here from the Philadelphia area.

POLICE	FIRE (Simplex)	RESCUE SQUADS (Simplex)
F-1 154.965 R Tactical	33.740 Alert	33.040 Alert
F-2 154.785 R North	33.680 Tactical	155.220 Alert
F-3 154.815 R South		155.205 Dispatch

The unit numbering system covers all municipalities in the county and indicates the station and type of unit. The first two digits represent the municipality and the last two the type of unit.

POLICE		FIRE		FIRE (cont.'d)	
Alexandria Twp	41	Amwell Valley	48	Three Bridges	33
Bethleham Twp	42	Annandale	46	West Amwell	26
Bloomsbury Twp	43	Bloomsbury	43	Whitehouse	22
Califon	44	Califon	44	Pottersville	54
Clinton	45	Clinton	45	Asbury	58
Clinton Twp	46	E. Whitehouse	31	Riegelsville	73
Delaware Twp	47	Fairmount	34	Hopewell	59
East Amwell	48	Flemington	49		
Flemington	49	Frenchtown	11	RESCUE	
Franklin Twp	91	Glen Gardner	12	Amwell Valley	48
Frenchtown	11	Hampton	13	Bloomsbury	43
Hampton	13	High Bridge	14	Califon	44
High Bridge	14	Kingwood	16	Clinton	45
Holland Twp	15	Lambertville	17	Flemington	49
Kingwood Twp	16	Lebanon	18	Frenchtown	11
Lambertville	17	Lebanon Twp	19	Hampton	13
Lebanon	18	Milford	92	High Bridge	14
Milford	92	Oldwick	24	Kingwood	16
Raritan Twp	21	Pattenburg	41	Lambertville	17
Readington Twp	22	Quakertown	91	Lebanon	19
Stockton	23	Raritan	21	Milford	92
Tewksbury Twp	24	Readington	32	Pattenburg	41
Union Twp	25	Sergeantsville	47	Stockton	23
West Amwell Twp	26	Stockton	23	Whitehouse	22

Additional prefixes are used for county government units:

Freeholders	84	Fire Marshall	87	Sheriff	99
Communications	85	Prosecutor	89		
Civil Defense	86	Court	98		

Vehicle or unit ID's go according to the following:

POLICE		FIRE		RESCUE	
Chief	01	Chief	60	Captain	50
Admin	02-04	Officers	70, 80, 90	Ambulance	51-54
Detective	05-09	Pumpers	61-68	Rescue	55-57
Patrol	10-20	Ladder	69	Other	58-59
Portables	35-40	Tankers	71-79	Portables	76-79
		Lights	81-85		
		Portables	94-98		

Thus, under this system a Clinton Police Patrol car would be "45-11", Frenchtown's Fire Chief is "11-60", and Lambertville's Ambulance is "17-51". The one exception is the Civil Defense units "86" which in an emergancy can be assigned to HAM radio operators under "RACES" for 2-meter repeater (WRZADD 147.975 in/147.375 out). The designation here would be C.D. code, municipal code, then a unit number. For example, as the second Clinton C.D. unit, my 2 meter HT would be designated "86-45-2".

That's a lot for one letter. I won't even try to include the "10-codes" that are used. I'll save them for another time.

Pennsylvania

Scranton Police Codes

10-0	Stop transmitting- stand by
10-1	General Broadcast
10-2	Unable to copy
10-3	Signal good
10-4	OK
10-5	Relay
10-6	Busy - unless urgent
10-7	In service
10-8	Out of service
10-9	Repeat
10-10	Location
10-11	Unnecessary use of radio
10-12	Special duty
10-13	Call dispatcher
10-14	Call cheif
10-15	Call captain
10-16	Call desk
10-17	Eating at _____
10-18	Call by phone
10-19	Dispatcher call me
10-20	Begin tour of duty
10-21	End tour of duty
10-22	Come to Hdqtrs.
10-23	Bank alarm
10-24	Burglar alarm
10-25	Burglary
10-26	Bomb threat
10-27	Armed robbery
10-28	Shooting
10-29	Man with a gun
10-30	Stabbing
10-31	Civil Disturbance
10-32	Riot
10-33	Prison break
10-34	Felony
10-35	Uniform personnel in area
10-36	Plainclothesman in area
10-37	Send wagon
10-38	Send fast wagon
10-39	Send tow truck
10-40	Send back up unit
10-41	Send ambulance
10-42	Oxygen needed
10-43	Fire
10-44	Advise nature of fire
10-45	Fire progress
10-46	False fire alarm
10-47	Stolen vehicle
10-48	Check stolen vehicle list
10-49	Vehicle registration check
10-50	Auto accident
10-50-1	Auto accident injuries
10-51	Hit & run car occupied
10-52	Hit & run car unoccupied
10-53	Investigate suspicious car
10-54	Stopping suspicious car
10-55	Direct traffic
10-56	Traffic congestion
10-57	Traffic lite out
10-58	Drunk driver
10-59	Breathalyzer test
10-60	Lost or stolen license plate
10-61	Stolen bike
10-62	Escort
10-63	N.C.I.C. Check
10-64	Drag racing
10-65	Bad street
10-66	Meet complaintant
10-67	Notify coroner
10-68	Drunk person
10-69	Disorderly person
10-70	Fighting
10-71	Family trouble
10-72	Missing person
10-73	Escaped inmate
10-74	Suspicuous person
10-75	Prowler
10-76	Boys annoyance
10-77	Suicide
10-78	Dog case
10-79	Detaining suspect
10-80	Emergency
10-81	Weather & road report
10-82	Negative
10-83	Road block
10-84	Information

CODES

A	Use caution
AA	Use caution (armed)
B	Assistance needed
BB	Assistance responded
RED	Serious situation
CC	Urgent run use lites & sirens
X	In progress

Lackawanna County Police Communications Center

10-0 Caution
10-1 Unable to copy-change location
10-2 Signal good
10-3 Stop transmitting
10-4 Acknowledgment (OK)
10-5 Relay to
10-6 Busy-unless urgent
10-7 Out of service
10-8 In service
10-9 Repeat
10-10 Fight in progress
10-11 Dog case
10-12 Stand by (stop)
10-13 Weather-road report
10-14 Prowler report
10-15 Civil disturbance
10-16 Domestic problem
10-17 Meet complainant
10-18 Quickly
10-19 Return to .....
10-20 Location
10-21 Call...by telephone
10-22 Disregard
10-23 Arrived at scene
10-24 Assignment completed
10-25 Report in person (meet).....
10-26 Detaining subject, expedite
10-27 (Drivers) liscense information
10-28 Vehicle registration information
10-29 Check for wanted
10-30 Unnecessary use of radio
10-31 Crime in progress
10-32 Man with a gun
10-33 EMERGENCY
10-34 Riot
10-35 Major crime alert
10-36 Correct time
10-37 (Investigate) suspicious vehicle
10-38 Stopping suspicious vehicle
10-39 Urgent - use light, siren
10-40 Silent run - no light siren
10-41 Beginning tour of duty
10-42 Ending tour of duty
10-43 Information
10-44 Permission to leave...for...
10-45 Animal carcass at.....
10-46 Assist motorist
10-47 Emergency road repair at....
10-48 Traffic standard repair at..
10-49 Traffic light out at.....
10-50 Accident (F, PI, PD)
10-51 Wrecker needed
10-52 Ambulance needed
10-53 Road blocked at.....
10-54 Livestock on highway
10-55 Intoxicated driver
10-56 Intoxicated pedestrian
10-57 Hit and run (F, PI, PD)
10-58 Direct traffic
10-59 Convoy or escord
10-60 Squad in vicinity
10-61 Personnel in area
10-62 Reply to message
10-63 Prepare make written copy
10-64 Message for local delivery
10-65 Net message assignment
10-66 Message cancellation
10-67 Clear for net message
10-68 Dispatch information
10-69 Message received
10-70 Fire alarm
10-71 Advise nature of fire
10-72 Report progress on fire
10-73 Smoke report
10-74 Negative
10-75 In contact with.....
10-76 En route
10-77 ETA (Estimated Time Arrival)
10-78 Need assistance
10-79 Notify coroner
10-80 Chase in progress
10-81 Breathalyzer report
10-82 Reserve lodging
10-83 Work school xing at.....
10-84 If meeting.....advise ETA
10-85 Delayed due to.....
10-86 Officer/operator on duty
10-87 Pickup/distribute checks
10-88 Present telephone No. of....
10-89 Bomb threat
10-90 Bank alarm at.....
10-91 Pick up prisoner/subject
10-92 Improperly parked vehicle
10-93 Blockade
10-94 Drag racing
10-95 Prisoner/subject in custody
10-96 Mental subject
10-97 Check (test) signal
10-98 Prison/jail break
10-99 Wanted/stolen indicated

01 Homicide
02 Rape & Attempt
03 Roberty & Attempt
04 Aggravated A & B
05 Burglary
06 Larceny (not auto)
07 Auto Theft
08 Other Assaults
09 Arson
10 Forgery
11 Frauds
12 Embezzlement
13 Stolen Property
14 Vandalism
15 Weapons Carrying etc.
16 Prostitution
17 Sex Offenses
18 Narcotics & Drugs
19 Gambling
20 Abandonment, non support

21 O.W.I.
22 Liquor Laws
23 Drunkenness
24 Disorderly Conduct
25 Vagrancy
26 All Other Offenses
27 Suspicion
28 Curfew & Loitering
29 Missing Persons
30 Motor Violations
31 Obscene Material
32 Election Laws
33 Game Laws
34 Perjury & Contempt
35 Probation Violator
36 Parole Violator
37 Conditional Release Violator
38 Bail Violations
39 Escaped Prisoner
40 Blackmail
41 Juvenile Delinquency
42 Abortion
43 Bribery
44 Obstruction Justice
45 Kidnapping
46 Contributing or Corrupting
47 Counterfeiting

PUBLIC SAFETY - SOUTHEAST:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — Florida, Georgia, N. Carolina, S. Carolina, W. Virginia, Virginia, and Disctrict of Columbia:

Railroads

Gary L. Sturm and
Bill Farmer, Editors

Send information about railroad frequencies and their uses, railroad radio system details, and related questions to:
Gary L. Sturm, 48781 Denton Rd., Apt. 37, Belleville, MI 48111.

We appreciate the comments we have received concerning the railroad column. Again this month we have reader input to print. We have a vast storehouse of data on Bill's computer, but we would like to use as much reader data as we can. Keep the data coming to us.

Thanks to Bill, a member in Georgia who sent in articles on the Georgia and West Point Route Railroads, and on the Louisville & Nashville, which appear this month. We hope others of you will take his lead and write articles for the railroad column.

WHAT DO THE CHANNEL DESIGNATIONS MEAN? — Part I

In our railroad frequency lists we use various terms such as road, yard, car department, etc., to designate what various channels are used for. Some of you may just be getting interested in railroad monitoring so we'd like to take some time to describe what these terms mean and what can be heard on each of the various types of channels. Some of the information is taken from a pamphlet called "The Need For and the Use of Radio by the Railroads", published in 1973 by the Association of American Railroads (AAR).

ROAD

The most important channel for monitor enthusiasts, and for the railroad, is the road channel. Trains operating on the main line use this channel to communicate with other members of their own crew, the crews of other nearby trains, and with wayside stations. On a freight train, for example, radio units are located in the engine and caboose.

On a long train, the distance between the two units may be one or two miles. Radio permits not only communications between the train crew in the caboose and the engine crew in the locomotive regarding the normal operation of their train, but is also a means of warning when an emergency or unusual condition occurs.

Some of the uses of radio for normal operation include explicit directions for the picking up or setting out of cars en route, location of loads and empties in the train, and information on tonnage and total number of cars (all of which helps the engineer in the safe handling of his train, r discussing contents of train orders—the documents which authorize and describe train movements to be performed.

Many potential disasters are averted by the use of train radio. Crews are constantly on the lookout for "hot boxes"—overheated bearings caused when lubrication fails, metal is broken or worn, or foreign matter intrudes. The speed of the turning axle may produce intense heat which is capable of melting the steel of the axle, "burning it off," and thereby derailing that car and perhaps a large number of other cars in the train. When a hot box is spotted, the engineer can be advised by radio and stop his train before damage occurs. Radio also serves when fires occur in loaded cars or along the right-of-way. Still another problem can arise from the shifting of loads in transit, which is frequently caused by broken bracings or strappings. A heavy open load which has shifted is capable of derailing cars in a passing train on adjacent tracks. Use of train radio can turn these potential disasters into minor incidents. The crews of all trains have standing orders to observe the condition of passing trains and to report any observed problems by radio to the crew of the train involved.

A number of railroads have devised systems whereby detector devices along the right-of-way transmit warnings to train crews immediately when a defect on the train is discovered. The road channel is used in connection with such devices as hot box detectors, dragging equipment detectors and wide load detectors. The Seaboard Coast Line is an example of a railroad which uses automatic transmitters on wayside detectors. A recorded voice gives a verbal report to the train crew after the train has passed over the detector.

Radio is also used between the lead locomotives and manned helper locomotives which may be at the rear of the train or cut into the train about one-third of the train length from the caboose. The radio is used by the two engineers to synchronize the operation of their respective locomotives to provide smooth handling of the train.

In the case of passenger trains, the locomotives are equipped with VHF radio units, and the train crew is provided with portable radios which are used for communication with the locomotive engineer.

On most railroads, the automobiles of supervisory and maintenance personnel working along the right-of-way are also equipped for the use of the road channel so they too can observe passing trains and advise train crews if there is any condition on the train that needs to be corrected. This would include hot boxes and shifted loads. However it also gives these off-train personnel the ability to warn train crews of such things as poor track conditions caused by high water or other damage as well as the ability to provide advice regarding stalled motor vehicles on rail crossings. Employees who work along the right-of-way often contact telegraph offices (the traditional railroad term, which today might better be called wayside offices) by radio to find out when trains will passing through the area where they are working. This is necessary so they can be clear of the track to

let the trains pass. Often the information on train movements is interesting to the monitor enthusiast also. Track crews may use the road channel, a PBX channel, or their own special channel, depending on the individual railroad.

The road channel is also used to provide communications between trains and telegraph offices. Railroad employees in offices and shops along the right-of-way, like the other employees already mentioned, have standing orders to observe the condition of passing trains. In addition to assisting with safety, radio is used to communicate routine information and instructions between trains and telegraph offices.

DISPATCHER

On a number of railroads, the radio system provides direct communication between the dispatcher and moving trains. The dispatcher is the railroad employee who has the responsibility of coordinating and directing train movements to see that trains move safely and efficiently over that area of the railroad he controls. The radio base stations are located at high points along the railroad and are often remotely controlled over land line facilities. Railroads who have microwave systems place their VHF base stations at the locations of microwave terminals or repeaters, using the same towers and buildings. When the stations are at remote locations, they are controlled by use of a phone channel on the microwave system. On some railroads, Southern Pacific and Union Pacific for example, the dispatcher base stations operate on the road channel. In some cases, such as Union Pacific in the far west, train radios are equipped to transmit a tone which alerts the dispatcher that a train is calling. Thus the dispatcher does not have to listen constantly to a number of radios picking up conversations from a large area.

In other cases, such as Florida East Coast and Western Pacific, two frequencies are used for communications with the dispatcher. In these systems, the dispatcher transmits on the road frequency (FEC 160.530, WP 160.380) but the train transmits to the dispatcher on a different frequency (FEC 160.650, WP 160.260). The dispatcher is not bothered by the constant chatter of the road channel since his receiver monitors only the dispatcher channel. At the same time, he can contact a train at any time since the train radios receive the road channel regardless of where their channel selectors are set. When called by the dispatcher, the train must change its channel selector to the dispatcher channel to answer, but this changes only the train's transmitting frequency. It continues to receive on the road frequency.

Still other railroads, like Boston & Maine and Southern Railway, use completely separate frequencies for road, dispatcher transmit, and dispatcher receive. Southern, for example, uses 160.950 for its road channel, but uses 160.245 and 160.830 for dispatcher transmit and receive, respectively. The dispatcher can call a train on the road channel and ask it to switch to the dispatcher channel.

PBX

Railroad mobile telephone service makes it possible for the radios in automobiles of supervisors and regularly assigned work crews to be connected into the railroad's privately owned trunk telephone facilities (Private Branch Exchange—PBX) to obtain information needed in connection with their work or, in the case of supervisors, to issue instructions to others without the necessity of going to a land telephone.

Pairs of dedicated frequencies are usually used for this service,

with base stations being located on mountaintops or microwave towers along the route of the railroad. Mobile units transmit on one frequency to the base stations, and receive from the bases on a different frequency. For example, the Union Pacific systemwide uses 161.520 for mobile transmit, while the base stations transmit on 160.290. The base stations usually retransmit what they receive from the mobiles, in addition to the land telephone side of the conversation. Both sides of the conversation can thus be heard on the base station output frequency, so it is not necessary to monitor the mobile frequency. We try to list both frequencies, when known, with the base station output listed first, just as repeater frequencies are listed (160.290/161.520).

Some railroads, like Union Pacific and Santa Fe, have installed touch-tone pads in their mobile units so that telephone numbers can be dialed directly without the necessity of talking to an operator.

Some railroads use different pairs of frequencies in different geographical areas. Southern Pacific, for example, uses four different pairs and Santa Fe has five different pairs in PBX service.

Next to the road and dispatcher channels, the PBX channels on railroads so equipped are often extremely interesting to monitor. In the case of unusual occurrences such as derailments or extreme weather conditions, these channels become even more interesting since supervisors can be heard coordinating the response to the emergency.

MAINTENANCE OF WAY

Trackside maintenance forces such as section forces, track supervisors, Communications Department maintenance personnel, Signal Department maintenance personnel and Engineering Department personnel operating along the railroad are provided with radios, usually in their vehicles. They can communicate with trains and telegraph offices on the road channel. On some railroads they are also equipped to use the PBX channel. On still others they may use a separate frequency for communications with each other in their normal work operations. For example, Engineering Department employees use radio in survey work and to communicate with gangs which may be distributed along the track. Examples of railroads which use separate Maintenance of Way channels are Union Pacific (161.025) and Santa Fe (161.010).

LOCOTROL

In recent years, American railroads have had great success in the operation, through the use of radio, of remote controlled auxiliary locomotives. The use of slave units in a train contributes to safety because they reduce slack action (which may injure crews in cabooses or damage lading) and improve braking speed and efficiency. Slave units are usually located toward the rear of a train. They automatically perform all operations needed in starting, pulling or stopping a train in response to controls from the lead locomotive in which the locomotive crew works. This is accomplished through a series of commands (actuated by manipulation of locomotive controls by the locomotive engineer) which are issued from the lead unit to the slave unit in digital message form via radio. The radio transceiver on the slave unit receives these commands and acknowledges their receipt to the lead locomotive by return digital message and further informs the lead unit that the command has been carried out. The several series of pulses thus used to transfer information between the controlling and the controlled locomotives are issued on a random basis, coded and programmed to provide fail-safe operation. Several trains which include slave units may, therefore, operate at the same time in the same area without detriment to train movement.

The slave operation is designed on the fail-safe principle. If a

noncompatible communication occupies the frequency being used for slave operations and if its transmitter is either higher in power than that used by the railroad radio or in close proximity to the railroad units, the slave locomotive thus interfered with is automatically brought to an idle, no-power condition.

The federal Communications Commission has allocated for slave locomotive and hump locomotive speed control the use of two exclusive frequency pairs, 452.925/457.925 MHz and 452.950/457.950 MHz. Under the existing rules as approved by the Commission, these frequencies cannot be used, even by railroads, for any other purpose. Since these frequencies carry no voice, only coded digital information, they are not interesting to most monitor enthusiasts.

HUMP

Railroad classification operations in yards and terminals, which tend to be concentrated in urban areas such as Chicago, where trains are made up and broken up, are usually carried out "over the hump" in railroad parlance. Cars are pushed along a single track to the top of the "hump," which is simply a hill in the classification yard. From this point, cars move by gravity, controlled by an automatic retarder system which limits speed to that needed for the car to travel the proper distances and couple to other cars without excessive impact. Through the operation of switches on the downhill side, each car is directed automatically to one of many classification tracks. This is a sorting operation which permits cars destined for unloading at a particular industry or, conversely, destined for movement outward on a particular train, to be put together so that they can be moved as a group out of the classification yard. In order to push cars to and over the hump, a hump locomotive is necessary.

In the past, hump locomotives were operated in the same manner as all other locomotives. Recently, however, radio control of cab signals and the speed of hump locomotives has been established and has worked very well. From a fixed point, digital commands are transmitted via radio to the locomotive. These commands have the effect of adjusting the hump locomotive speed in order to obtain the maximum efficiency in the movement of cars over the hump. The system used is compatible with and similar to that used for slave locmotives. Hump locomotives are operated as additional units in the slave service and use the same frequency assignment.

All of the humping operations do not have equipment to provide cab signals or speed control for hump locomotives, and these functions are carried on by voice radio. The yardmaster in charge of the hump issues instructions to the locomotive engineer, advising him to move, how fast to move and when to stop. Voice radio is also used in connection with those yards that have cab signals and hump speed control. In this event, the radio is used to advise the engine crew regarding the nature of the work they are to perform and to issue instructions regarding what is termed as "trimming the classification yard" which consists of pushing cars which do not roll far enough down the tracks or pulling cars back that have gone down the wrong track.

YARD

Yard channels, sometimes called switching channels, are used in terminal areas. In large switching yards, operations may be conducted by a number of switcher locomotives. A switching crew on the ground uses hand-carried paksets to guide the engineer of the locomotive in his movements. Frequently, these instructions come to the engineer from switchmen he cannot see. He is told for example, "Back up 10 car lengths, 5 cars, 2 cars, 1 car—now stop." In large yards, each engine may operate on a different frequency to avoid interference and

the possibility that instructions intended for one locomotive might be mistakenly acted upon by another.

Switching operations carried out by road trains in areas far from terminals are usually conducted on the road channel.

We'll continue this article in Part II next month.

THE GEORGIA RAILROAD & WEST POINT ROUTE

The Georgia RR, the Atlanta & West Point RR and the Western Railway of Alabama operate as one system for the purpose of radio traffic. The system Road Channel (#1) is 161.310 and the Yard Channel (#2) is 161.430. Most operational traffic occurs on the Road Channel. Rear to head end reports are required each time a Hot Box Detector (or Defect Detector) is passed. Dispatchers have wire line controlled simplex remote base stations which give almost systemwide coverage. Trains supposedly can call the dispatcher by clicking the mike transmit button several times, but this home made feature seldom works. The dispatcher (only one for the system) "dials up" the desired remote station he wishes to monitor or use. Channel 2 (yard) is used little outside of the major cities. Many system radios also have Southern RY road channel (160.950) since the Georgia RR uses Southern's yard in Macon and Southern uses W of A's yard in Mongomery.

With the advent of the Family Lines concept, radio monitoring of the system has become more complex. Now SCL and L&N run-throughs and L&N coal trains use the system. Initially they tried changing radios on the train, but soon found that impractical. Now L&N Road (161.370) and SCL Road #2 (161.100) have been added to most fixed stations including the dispatcher remotes. So nowdays you must monitor all three road channels to keep up with the road traffic since the crews usually use the frequency of the railroad delivering the train.

In summary: 161.310 System Road; 161.430 System Yard; 161.370 L&N Road; 161.100 SCL Road #2.

—Bill (GA-026)

LOUISVILLE & NASHVILLE RAILROAD

The systemwide road channel is 161.370. Just about everyone and everything on the railroad has and uses this frequency. Conversations between the dispatchers and mobile units (trains, etc.) utilize 161.370 and 161.520. Mobile units initiate calls to the dispatcher by transmitting on 161.520. The dispatcher constantly monitors this frequency via a series of wire line controlled remote base stations which give almost complete mainline coverage and extensive branch line coverage. To return the call (or to initiate a call) the dispatcher selects (rings up) the closest remote base and transmits on 161.370. So to monitor road activity, the only channel required is 161.370. However if you want to hear what the train is telling the dispatcher, you must also monitor 161.520.

The only other systemwide channel known to me is 161.175. This is a sort of catch-all channel which has little use. Principal users are the signal and communications maintenance personnel. Also the derrick (wrecker) crews use it at derailments.

L&N has no systemwide PBX system such as found on ATSF and SP. However some local PBX activity has been noted, so a systemwide PBX system may become a reality some day.

The larger yards have the usual special frequencies peculiar to that yard with some showing up more frequently than others. Also the Mobile Agencies have separate channels.

The Mobile (Alabama) Division has always been a communications maverick ever since they unsucessfully tried to use a troposcatter system between Mobile and Georgiana, Alabama for CTC control. More successful and still in use is a combined wire line & VHF radio system to control several Branch Line Dispatcher remote base stations in south Alabama. Wire line along the main line is used from the dispatcher at Mobile to Georgiana and Fort Deposit. At Georgiana 160.230 is used to link with the remote branch line base stations at McWilliams and Opp. Also 160.320 is used for the station at Deer Range. At Fort Deposit 160.320 controls the station at Berlin (near Selma). At each of these remote Branch Line stations, the train side of the station receives on the 161.520 "Dispatcher In" frequency and transmits on the 161.370 Road Channel.

L&N trains are generally numbered as follows:

100s	Cincinnati Division	500s	Nashville Division
200s	Louisville Division	600s	Atlanta Division
300s	Birmingham Division	700s	Evansville Division
400s	Mobile Division	800s	Cumberland Valley Division
		900s	Monon portion of Lou. Div.

Each division's train number is usually further broken down as follows:

01-19	Misc. freights	70-99	Through freights
20-29	Piggyback & Auto	70-79	Cincinnati-New Orleans
30-59	Local freights	80-89	Memphis-Atlanta
60-69	Secondary through freights	90-99	To/from Evansville Div.

Odd numbers are southbound and even numbers are northbound.

Road channel traffic consists of the customary operational traffic between trains, vehicles and fixed points (stations, operators & dispatchers). The only required transmission is the rear end reporting the status of Hot Box (or Defect Detectors) to the head end as each site is passed. Detectors are usually about 30 miles apart and are located along most mainlines. Since the detectors are usually of the "billboard" type which give axle count, the usual transmission is "all zeros on the detector" (meaning no defects detected).

Since some of this information is dated, corrections and additons are welcome. And as mentioned before, many more channels are in use at the larger yards and terminal areas.

In summary: 161.370 Road; 161.520 Train to Dispatcher; 161.175 Derrick.

—Bill (GA-026)

Joe (MD-015) would like to know the Seaboard Coast Line frequencies for police and maintenance-of-way in St. Petersburg, Florida. Can anyone help?

Other data needed:

B&LE	Conneaut Ohio
Canadian National	Toronto & Montreal yards
Chessie	Silver Grove KY yard
Conrail	Conway Yard PA, Altoona PA, Toledo OH, East St. Louis IL
GTW	Detroit MI UHF police repeater
ICG	Memphis TN yard, East St. Louis IL yard
N&W	Norfolk VA
Southern	Atlanta GA yard
Union Pacific	Pocatello ID, Salt Lake City UT, Kansas City MO

Until next month, happy monitoring—Gary & Bill

This column is for the exchange of space communications systems (manned or unmanned), frequency information, orbital data, hobby receiving equipment and antennas. Questions and column input pertaining to Space Communications Monitoring should be sent to:

Larry Van Horn (TN-014)1111 N. Carrier Pkwy., B-107, Grand Prairie, Texas 75050.

Greetings all and welcome to the September Space Communications column. This month, our beginners series will list most all the past, present, and future satellites, satellite series and assorted agencies involved in space activities. In addition to names and acronyms, country/agency launching the spacecraft, abrief explana- of the craft's mission will appear to give the reader an idea of the series/ mission's purpose.
NOW ON WITH THE SHOW...

SPACE NAMES AND SYSTEMS

Aeros	FRG	scientific satellite
Aerosat	ESA	Exp. aircraft COMSAT, mission cancelled till further notice due to budget cuts.
AFSATCOM	USAF	Military COMSAT, see FLTSATCOM.
Alouette	Canada	First Canadian satellite series,(2 in series).
Amerisat	US	American Satellite Corp. series of COMSATS
AMPTE	NASA/FRG	Space Physics payload.
AMS	US	METSAT
Anik	Canada	World's first commercial COMSAT.(Eskimo word for brother).
Anna	US	Army, Navy, NASA, Air Force joint satellite. geodetic data.
ANS	Neth	Astronomical Netherland Satellite
Apollo	US	3rd series of manned missions, manned moon program.
Arabsat	Arab consort	Future arab countries COMSAT.
Ariel	NASA/UK	ionospheric satellite
Aryubhata	India	Atmospheric research satellite, named after 5th century astronomer and mathematician.
Astro	Japan	
ATS	US	Application Technology Satellite, exp. satellite
Aureale	USSR/France	scientific satellite studied the northern(polar) lights.
Aurora	USA/USN	Scientific satellite
Aurorae(ESRO-1A)	ESRO	scientific satellite, carried experiments to measure the polar ionosphere.
Aussats	Australia	(ANSCS) Will be the first Australian COMSAT series.
Azur	FRG	German research satellite.
A-1	France	(Asterix) First French satellite, transmitted 2 days.
Bhaskara	India	Earth Resources Satellite(similiar to Landsat)
Biosatellite	US	America's least successful space program. Craft carried animals into orbit.(3 in series).
Big Bird	USAF	huge USAF multi function satellite. Also known as LASP- Low Altitude Surveillance Platform.
Black Arrow	UK	First Booster of the United Kingdom.
BMWES	US	Ballistic Missile Early Warning Satellite.
Boreas (ESRO-1B)	ESRO	See Aurorae, short life 52 days. malfunction due to spacecraft booster.

Calsphere/Thorburner	USAF	Radar calibration sphere, possibily related to anti-satellite activity.
Cameo	US	Released Barium cloud.
Castor	France	scientific satellite launched with Pollux, First pair failed to orbit(Other designations D-2A/D-5A)
CAT	ESA	Vehicle test satellite for the first Ariane booster launch.
China #	PRC	Relatively small satellite program to date, mostly sciantific satellites/ recon satellites.
COMGEN	US	Communications General COMSAT series.
Composite	USN	
COMSTAR	US	Domestic COMSAT of COMSAT, Inc.
Corsa	Japan	Never reached orbit.
COS-B	ESA	scientific satellite
Cosmos	USSR	a multi-mission satellite series for the Russians. over 1300 satellites have carried the Cosmos title. Sometimes written Kosmos on certain list.
Courier	US	First active repeater satellite.
CTS	Canada	Canadian COMSAT, Communications Technology Satellite
DATS	USAF	Despun antenna test satellite.
DE	US	
Denpa	Japan	scientific satellite (SS-2)
Dial 1 WIKA	FRG	scientific capsule
Discouverer	US	Early USAF photographic recon satellite series.
DMSP	USAF	Defense METSAT program.(Block 5D)
Dodge	USN	DOD Gravity Experiment
DSCS	USAF	Defense Satellite Communications System.
D-1 (Diapason)	France	geodetic data research satellite
D2-B (Aura)	France	Solar UV emission study satllite.
D-1C(Diademe 1)	France	Geodetic satellite
D-1D(Diademe 2)	France	Provided laser and doppler data for 2 years.
D-2A(Tournesol 1)	France	scientific satellite that studied solar and UV range
Early Bird	US	World's first active commercial COMSAT, INTELSAT 1.
Echo	US	Large silver balloon structures used as passive COMSAT objects.Was highly visible at dusk.
ECS (Ayame)	Japan	Exp. COMSAT
ECS	ESA	European Communications Satellite
Ekran-Statsionar	USSR	TV COMSAT (means'Screen'in Russian)
Elektron	USSR	scientific satellite series that studied the Van Allen Radiation Belts. (launched as a pair of satellites)
Eole	France	Exp. atmospheric research and weather satellite.
ERS	USAF	Enviromental Research Satellites, launched piggy-back with Vela satellites.
ERTS	NASA	Earth Resources Technology Satellites, see Landsat.
ESA-GOES	ESA	Scientific Satellite.
ESSA	US	Enviromental Survey Satellite.
EXOSAT	ESA	Scientific satellite formerly known as HELOS
Explorer	US	extensive series of scientific research satellites. The following is a list of the different types of explorers that have flown: IMPs-- Interplanetary Monitoring Platforms. Beacon Explorers-- used to study gravimetric geodesy and electron density of atmosphere. Dual Launch Explorers: Air Density/Injun Explorers. GOES Explorers Solar Explorers (1) Radio Astronomy Explorers Small Astronomy Explorer Atmospheric Explorer

FLTSATCOM	US	Military COMSAT/usually flies with AFSATCOM transponders on board. There have been 5 in the series thus far. 4 operational and one in orbit spare
FR1	France	VLF wave propagation research satellite.
Galaxy	US	Hughes Corp. COMSAT series.
Gemini	US	2nd manned series for the US, used to perfect space operations.
Geophysical Research Satellite	USAF	
GGSE	USN/USA	Gravity Gradient Stabilization Exp.
GGTS	USAF	Gravity Gradient Test Satellite
Giotto	ESA	Halley's Comet Intercept package by the Star Consort
GOES	US	Geodynamics Ocean Exp. Satellite
GOES	US	Geostationary Operational Enviromental Satellite, METSAT in geostationary orbit. Part of the WWW-Worldwide Weather Watch system of 5 satellites.
Gorizont	USSR	COMSAT for telephone/ TV.
GPS	US	NAVSAT system named also NAVSTAR. GPS stands for Global Positioning System, also see NAVSTAR.
GSD	USAF	Grid Sphere Drag
Gstar	US	GTE Corporation COMSAT series.
HCMM	US	Heat Capacity Mapping Mission, scientific satellite.
HEOS	ESRO	Highly Eccentric Orbiting Satellite. 2 in series.
HEAO	US	High Energy Astronomy Observatory.
Helios	FRG	solar scientific probe.
Himawari/GMS-1	Japan	METSAT, part of the same WWW system as the US GOES, see GOES.
Hitchiker	USAF	radiation satellite.
Hoducho/Corsa-B	Japan	scientific satellite.
IDCSP/IDSCS	USAF	Initial Defense Communications Satellite Program, later renamed Initial Defense Satellite Communication System, series of military communications satellites
IMEWS	US	Intergrated Missile Early Warning Satellite, newer version of early warning satellite system than the BMEWS.
Insat	India	COMSAT/METSAT platform in geostationary orbit
Intelsat	CSC	International television/telephone COMSATs in geostationary orbit.
Intercosmos	USSR	Russian international research satellites. Joint ventures between the Russians, East Bloc Nations and different nations .
IRAS	US/Neth	Infared Astronomy Satellite.
IRIS	ESRO	Scientific satellite.
ISIS	Canada	International satellite for scientific studies.
Iskra	USSR	Recent series of satellites possibly experimental technology satellites. First satellite conducted Aeronautical communications exp. The second craft was the satellite the Salyut seven cosmonauts launched in orbit(Ham satellite).
ITOS	NOAA/US	Improved Tiros Operational System. ITOS- then a letter is used as the prelaunch designation of the different craft. Once in orbit the designation changes to NOAA then a number.
ITOS1/TIROS-M	US	was first craft of the second generation of METSATs.
IUE	US	International UV Explorer, Joint NASA/ESA/UK science research council project.
Jiki-ken	Japan	Japanese research satellite

KH-11	US	A digital imaging photo recon satellite of the CIA known also as Project 1010. Details of the project were exposed when a CIA employee sold a manual to the Russians.
Kika (ETS-1)	Japan	a ATS type satellite, Engineering Test Satellite, also known as 'Chrysanthemium".
Kyokko	Japan	Scientific satellite to investigate the northern lights.
LaGOES	US	Laser reanging geodetic satellite.
Lambda 4S	Japan	A japanese booster rocket.
Landsat	US	Part of the earth resources satellite series.
LCS	USAF	LincolnCalibration Satellites. Lincoln labs series of experimental/scientific satellites.
LES	USAF	Lincolc Experimental Satellites. Contains numerous experiments including UHF communication transponders in use by the US military establishment.
Lidas	USN	Large Inclination Doppler only Satellite.
Lofti	USN	Low Frequency Trans-Ionospheric satellite.
LSAT	ESA	Future series of Direct broadcast satellites for European use.
Luna	USSR	Unmanned moon exploration series.
Lunar Orbiter	US	Five lunar orbiting craft launched for lunar exploration.
Lunokhod	USSR	Soviet unmanned moon probe orbiter. (walker)
LUXSAT	Luxemborg	Direct Broadcast Satellite for the tiny country of Luxemborg.
Magion	Czech	Magnetosphere-ion study/scientific satellite.
MAGSAT	US	scientific satellite.
MARECS	ESA	Maritime COMSAT program.
Mariner	US	Planetary exploration program of which the Voyager satellites are apart. See Voyager.
Marisat	CSC	Maritime COMSATs
Marots	ESA	Maritime satellite
Mars	USSR	Soviet Martian planetary probes.
Mercury	US	First series of US manned spacecraft programs.
Meteor	USSR	Soviet orbiting METSAT program.
Meteosat	ESA	Geostationary METSAT, part of the WWW.See GOES
Midas	USAF	Missile Defense Alarm Satellites.
Miku	France	engineering capsule used to measure launch vehicle performance
Miranda	UK	Called X-series, only 1 shot, tested 3 axis attitude control system.
Molniya	USSR	COMSAT satellites that use high elliptical orbits for maximum visibility to the Russian mainland.
NATO	NATO	Military COMSATS
NAVSTAR	US	Satellite navigation system using time and ranging. Part of the GPS system.
NDS	US	Navigational Development Satellite. (NAVSTAR 1).
Nimbus	US	METSAT (Latin word means'Rain Cloud')
NOAA	US	METSAT series, see ITOS.
NOSS-1/SSU-1,2,3	US	Navy Ocean surveillance satellites.
NTS	USN	NAVSTAR precursor, Timatron 3 NAVSAT renamed after launch NTS-1
OAO	US	Orbiting Astronomical Observatory.
OFO	US	Orbiting Frog Olatlith, radiation Meteoroid satellite
OGO	US	Orbiting Geophysical Observatory.
Orbis	USAF	Orbiting Radio Beacon Ionospheric Satellite.
Orbis-cal	USAF	
Oreol	France/USSR	Scientific satellite.
OSCAR	US/UK/Australia	Orbiting Satellite Carrying Amateur Radio, Amateur Radio satellites.

OSO	US	Orbiting Solar Observatory.
Osumi	Japan	scientific payload, First Japanese satellite.
OTS	ESA	Orbiting Test Satellite, COMSAT, First satellite in the ECS program. See ECS
OV	USAF	Orbiting Vehicle.
PAC-1	US	Test of semi-active gravity gradient stablization (SAGS) technique.
PAGOES	US	Balloon satellite. Part of the Geodetic space program Passive Geodetic Orbiting-Earth Satellite
Palapa	Indonesia	Indonesian COMSAT system built by Hughes aircraft.
Pegasus	US	Meteoroid Technology satellite (wing vehicles)
Peole	France	Scientific satellite.
Pioneer	US	Interplanetary Explorers, solar system scientific craft.
Pioneer Venus Orbiter-	US	Venus probe.
Pollux	France	technology satellite, D-2B/D-5B, see Castor.
Polyot	USSR	Maneuverable satellite series.
Prognoz	USSR	Solar Radiation satellite.
Progress	USSR	Salyut resupply vehicles.
Propero	UK	Scientific satellite.
Proton	USSR	Cosmic Ray Satellites.
P-76-5	USAF	Scientific satellite, communication propagation experiment.
Radcat	ARPA	Radar Calibration Target Satellite.
Radio Sport	USSR	RS-series of amateur radio satellites.
Radose	USAF/USN	radiation dosimeter payload.
Raduga	USSR	Russian COMSAT, means 'Rainbow'.
Ranger	US	Lunar Lander program. First six landers failed. Landers 6 thru 9 landed safely.
RCA-SATCOM	US	RCA-Americom's Series of TV broadcast COMSATs.
Relay	US	COMSAT
RM18	USAF	IR & TV measurements of the earth's IR background.
Rohini	India	small satellite.
SAGE	US	Scientific satellite.
Sakura	Japan	Japanese COMSAT
Salyut	USSR	Russian manned space stations, similiar in most respects to the US Skylab program.
SAMOS	USAF	Satellite and Missile Observation Satellite(Photo Recon satellite)
San Marco	Italy	scientific satellite
SATCOL	Colombia	Colombian COMSAT.
SBS	US	Satellite Business Satellite
SBTS	Brazil	Brazilian COMSAT.
Scatha	US	Joint DOD- NASA Technical exp.
Score	US	World's first COMSAT
SDS	US	Satellite Data System
Seasat	US	Exp. ocean survey satellite.
Secor	USN/USA	Sequantial Collation of Range satellite.
Shinsei	Japan	Scientific satellite (SS-1), means "New Star"
SIRIO	Italy	Exp. COMSAT
Skylab	US	US Space Station part of the Apollo Applications program. 4 missions to the craft prior to the station reentering over the Indian Ocean.
Skynet	UK	Synchronous orbit Military COMSAT.
SMM	US	Solar Maximum Mission.
SMS	US	Synchronous orbit- METSAT.
Snapshot	USAF/USA	SNAP Power supply exp. (nuclear power supply).
Solrad	US	Solar Radiation satellite.
Soyuz	USSR	3rd generation Russian manned spacecraft.

Soyuz T	USSR	Updated version of the Soyuz. Currently being used to ferry cosmonauts to the Salyut space station.
Spacelab	ESA	The cargo lab to be carried by the space shuttle in the middle 80's. Will carry US as well as European crew members into space.
Spacenet	US	The South Pacific Corp, COMSAT series that will carry the SPRINT system.
Space Telescope	US	Will be carried into space and serviced by the Space Shuttle Transportation system. Will carry a faint object camera (FOC) and expand the visible universe considerably.
SPM	ESA	Solar Polar Mission
Spot	France	ERTS type satellite, similiar to Landsat.
Sputnik	USSR	Scientific satellite, World's first satellite was Sputnik 1.
SRET	France	French test payload launched by USSR.
SSU	US	Launched June 8, 75 unknown mission.
Starlette	France	Geodesic satellite
Starad	USAF	Starfish artificial radiation satellite.
STC	US	Satellite TV Corp.'s proposed Direct Broadcast satellite.
STP	USAF	Space Test Program, formerly(SESP)
STS	US	Space Transportation System, space shuttle for short.
Surcal	USAF/USN	surveillance calibration system.
Surveyor	US	Soft landing moon probes.
Symphonie	France/FRG	Exp. COMSAT
Syncom	US	COMSAT constructed by Hughes,Aerospace.
TACSAT	USAF	Formerly called TACOMSAT, was a Military COMSAT.
Taiyo/SRATS	Japan	scientific satellite,means 'The Sun'./ Solar Radiation and Thermospheric Structure Satellite.
Tansei	Japan	scientific satellite,(MS-T1/MS-T2) means 'Light Blue'.
TD-1A	ESRO	scientific satellite.
TDRSS	US	Western Union's advanced WESTAR series, that will relay STS communications.
TDF-1	France	Direct Broadcast Satellite series for France. joint venture with F.R.Germany.
Telecom	France	COMSAT
Telestar	US	Active Repeater COMSAT.
Telestar	US	AT & T COMSAT Series.
TETR	NASA	Apollo tracking net and training satellite
Timation	USN	Navigational Technology Satellite, later merged with NAVSTAR system.
TIROS	US	Television and Infared Observation Satellite, METSAT
TIROS-N	US	2nd generation TIROS METSAT.
Titan III B-Agena	US	Recon satellite, High resolution film.
TOPO	USA	Army's SECOR type tactical survey satellite.
Tounesol	France	See D-2A spacecraft description.
TRAAC	USN	Transit Research and Attitude Control Satellite.
Transat	USN	Navy Navigational Satellite.
Transit	USN	First Navigational Satellite.
TV-SAT	FRG	Direct Broadcast Satellite.
UKMSCA	UK	Will be the first British Military COMSAT payload.
UK-X4	UK	Scientific satellite,see Miranda.
UME/ISS-1	Japan	Ionospheric sounding exp.
UOSAT	UK	Amateur Radio Satellite.
USSS	US	US Satellite System COMSAT.
UV. Radiometer	USAF	Short wave radiation exp.
Vanguard	US	US satellite program that had a lot of problems.
Vela	USAF	Nuclear explosion detonation detection satellites.

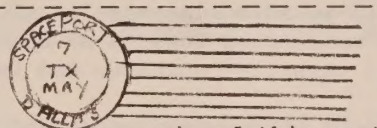
Venera	USSR	Soviet Venus planetary probes.
Viking	US	Mars orbiter/lander program.
Viking Payload	Sweden	
Voskhod	USSR	2nd generation Russian spacecraft.
Vostok	USSR	1st generation Russian spacecraft.
Voyager	US	Jupiter-Saturn Flyby missions.
WESTAR	US	Western Union-Domestic COMSAT.
WRESAT	Australia	Weapons Research Establishment satellite. First Australian satellite tarnsmitted for 5 days.
Yuri	Japan	Exp. broadcast satellite.
Zond	USSR	Lunar and planetary explorers.

Notes: All underlined names have not flown to date as of yet. Underlined letters represent letter parts of acronyms.

Abbreviations:

COMSAT-Communications satellite
METSAT-Meteorological satellite
Exp.-Experimental
FRG- West Germany
ESA-European Space Agency
Neth- Netherlands
UK-United Kingdom
PRC-People's Republic of China
USA-US Army
USN-US Navy
USAF- US Air Force
ESRO- European Space Research Org.
CSC - COMSAT, Corporation.
ARPA- Advanced Research Project Agency

CORRESPONDANCE



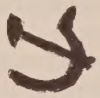
A few letters have been recieved this month, so let's dip into the mailbag. Elmitt Eastcott out in California checks in and reports that space shuttle communications can be heard via a local Amateur Radio Repeater. This material will appear next month with the rest of the Space Shuttle material for continuity purposes. Sorry for the delay Elmitt.

Rick Matthew, CANA002 sent an update on our June column which will appear very soon.

William Stookey, HI-001, is looking for a down converter for his Bearcat 220 for the 1.45-1.55 Ghz. range (L Band). He's interested in monitoring maritime emergencies.

William I know of no specific converters for the L Band, but I have heard of several 2.3 Ghz. systems. I'll check some sources I know of and in the meantime William and I would like to hear from anyone currently monitoring this area. We would appreciate hearing about your systems and the types of communication system you are using.

THE RUSSIANS



Yes, Valentina, the Soyuz T-5 crew is really up there and running alot of HF traffic. The Soviet Union launched it's Salyut 7 space station on April 19 into a 278 X 219 Km. 89.2 min period, 51.6 degree inclination orbit. This Salyut has all the markings of a Salyut in the civilian series, vice the military Salyut's (i.e.-Salyut 2,3,5). On May 13, 1982 at 0938 GMT,Lt. Col. Anatolly Bereovoy, age 40, mission commander, and cosmonaut Valentin Lebedev, also 40, as the mission pilot, blasted off from Baikonur (Tyuratam), for the Salyut 7 on board the Soyuz T-5 spacecraft. After docking the T-6 craft with two Russians and one Frenchman was launched. July 3 right after T-6 returned to earth, I caught a CW transmission from what appeared to be a Russian ground station communicating with the Salyut. At 1740 GMT a high speed CW signal sending crazy CW was heard with a S9± signal on 20.008 Mhz. About 30 minutes later, I intercepted a CW signal on the same frequency from the Salyut 7 crew. The CW transmission was being sent at rather slow speed from a novice fist. After the CW signal, a FSK carrier was monitored followed by a FSK data transmission 15 seconds in duration. Doppler shift and polarization fading were noted characteristics of Salyut's signal. I caught one more ground station transission at 2012 GMT, then no more signals were monitored that evening.

July 4 brought a tracking beacon on 19.954 Mhz. at 0139 GMT. It's not clear at this time whether the beacon is from the Salyut 7 or the Cosmos 1267(the latter the more likely)complex currently docked to the rear docking port of the Salyut 6 space station. Cosmos 1267 is believed to be an anti-satellite system(Aviation Week and Space Tech's version). Others say it is a modular block towards expanded space station operations being developed by the Russians. Cosmos 1267 was launched April 25,81 and has exhibited highly maneuverable characteristics.

Those of you with HF rigs might want to watch the 19.5-20.05 Mhz. region as this area is rich with Russian space activity manned and unmanned. If you live on the East Coast , give 143.625 Mhz. a try as the Soviet may try to use VHF to communicate with their tracking ship, the scientific research ship Akademik Sergey Korolev in the Atlantic Ocean. These will be voice transmission,FM and wide deviation. Some may wish if you use a converter set up for AM to use slope detection to hear these signals. If you have a CW/RTTY reader and monitor 20.008 Mhz. transmissions, I would be very interested in the traffic you monitor. Give it a try, you might enjoy it.

NEXT MONTH

October will be a special space month. To honor the first operational mission of the Space Shuttle, STS-4 in November, ye Editor will have a special communication profile on the shuttle communication system. Also in our regular Space Comm column I'll feature material on Shuttle monitoring activity, payload profiles for STS-4 and general shuttle information.

Two final notes. First anyone having any information on the following USSR spacecraft, GALS, LOUTCH, and VOLNA; drop ye ed a line and let me know what ya have on them. Also anyone interested in monitoring Russian HF space activity and those already doing so drop me a letter, cassette, whatever and let's swap notes/fequencies/etc.

Thanks to all for bearing with the long column this month and hope the information will be of use. Till October, 73's and good listening to all.

NEW MEMBERS LIST

AK 004 SWINDOLL, ALVIN;RR 1 BOX 408-A;CONWAY, AK 72032
AZ 048 HOLLAND, GARY;1939 W BERRIDGE LN A17;PHONEIX, AZ 85015
CAKE017 STRAND, JOHN;P.O. BOX 1104;TEHACHAPI, CA 93561
CALA503 FLESHER, AKIVA;7938 FULTON AVE;N HOLLYWOOD, CA 91605
CALA504 POIRIER, RALPH;505 S WILTON PL;LOS ANGELES, CA 90020
CAOR246 MC COY, MIKE J;809 W STEVENS NO 2;SANTA ANA, CA 92707
CASB053 HEWETT, ED;P.O. BOX 476;FATTON, CA 92369
CATO004 WEGGERS, BILL;4751 W CAPITOL AVE;W SCRAMENTO, CA 95691
CO 036 HARRINGTON, ROB;P.O. BOX 3434;LITTLETON, CO 80161
CO 037 KOUCHERIK, JAMES;9385 W MAPLEWOOD AVE;LITTLETON, CO 80123
CT 069 REPETTO, STEPHEN;42 GLENSTONE DR;VERNON, CT 06066
CT 070 MASSARIA, MICHAEL;115 BEAR PAW ROAD;BRIDGEPORT, CT 06606
CT 071 LEE, RICHARD * ADDRESS WITHHELD BY REQUEST
FL 157 WILLETS, DOUGLAS R;4309 BERKLEY DR;TAMPA, FL 33610
FL 158 DEREVERE, RICHARD S;2542 ARTHURS COURT LN;
TALLAHASSEE, FL 32301
IA 036 WILSON, DON;1415 AVE B;COUNCIL BLUFFS, IA 51501
IL 242 HERBERT, G.H.;1422 W BAY RD;MC HENRY, IL 60050
IL 243 HAYES, DAVID;RR ;ROSEVILLE, IL 64173
IN 069 STUMP, D.;140 WEST AVE;GOSHEN, IN 46526
IN 070 WESTERMAN, ALAN C;614 FOX LANE;FORT WAYNE, IN 46807
KS 030 FIDDICK, HERB;8316 LAMAR;OVERLAND PARK, KS 66207
KY 039 BARNES, GENE R;427 BERMUDA LN;LOUISVILLE, KY 40213
KY 040 ALEXANDER, RICKEY;RR 1 BOX 364;DAWSON SPRINGS, KY 42408
LA 034 WELLS, JAMES D;859 S BURGESS DR;BATON ROUGE, LA 70815
MA 123 FELL, FRANK G;17 WESTGLOW ST;DORCHESTER, MA 02122
MA 124 WHITMAN, PAUL H;21 EATON ST;WINCHESTER, MA 01890
MA 125 STYLES, WILLIAM;32 PINE ST;PEABODY, MA 01960

MD 071 SMEBY, L.C.;1510 PICKFORD LANE;BOWIE, MD 20716
MI 119 WHITAKER, WILLIAM;171 CHARLES LANE;PONTIAC, MI 48053
NC 050 PERRY, RICHMOND;LOT 303 MATIKA VILLA;SALISBURY, NC 28144
NJ 161 KULBURG, RICHARD;249 HORNBLOWER AVE;BELLIVELLE, NJ 07809
NM 010 PICKET, JOE;P.O. BOX 5971;SANTA FE, NM 87502
NY 224 POWERS, KENNETH;38 HMILTON PLACE;TARRYTOWN, NY 10591
NY 225 LANGDON, ROBERT H;6 SUSSEX PLACE;DEER PARK, NY 11729
NY 226 KELDER, WILLIAM R;P.O. BOX 247;MIDDLETOWN, NY 10940
NY 227 METZGER, RALPH B;32 AMY TODT DRIVE;MONROE, NY 10950
NY 228 MENCZER, MR E.;169 HOOPER ST;BROOKLYN, NY 11211
OH 138 CARPENTER, BRADLEY;235 LAKE AVE APT 11;HARTVILLE, OH 44632
PA 175 KIRBY, CHARLES;BOX 248 MELODY LAKES;QUAKERTOWN, PA 18957
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CANA090 HENLEY, J. KEITH;490 EGLINTON EAST SW 701;
TORONTO, ONT, M4P-1M4, CANADA

We have made an increase of $1.50 in the dues effective with renewals after 1 September 1982. This has been done to cover some outstanding expenses we have occurred for the following.

Insurance. Since we have gotten large we have had several people indicate they would take us to court over some cause. We have now purchased liability insurance for the newsletter. Cost $1900.00

Bigger Newsletter printing and Mailing Costs. We have had to go to a mailing house to handle the newsletter. This cost and the additional publishing cost of the 80+ page newsletter has upped our costs about $300 per month.

The afore mentioned costs exceed the $1.50/member assement, but we plan to hold the newsletter to between 60 and 80 pages for a few months to cover the rest. All in all we still think we are the best of any of the club newsletters.

Should anyone wish to renew at the old rates printed on page 1 of this this newsletter prior to Sept 1, you may do so if you can get an August 82 postmark on your envelope.

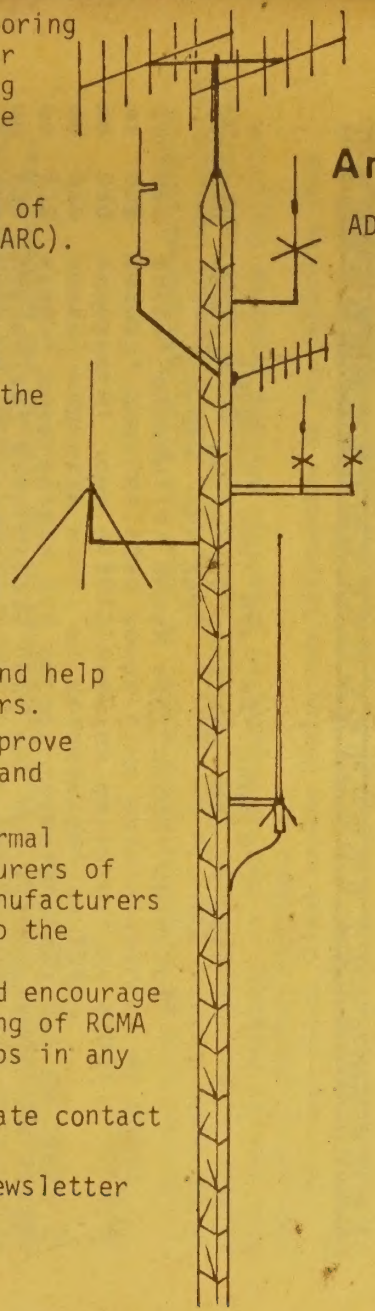
NOTE: Please when your send renewals to the P.O. Box mark them as renewals.

Please send frequencies to the appropriate editors. If you send them to the main P.O. Box At best they will get to the the editor at least 3 months late.

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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